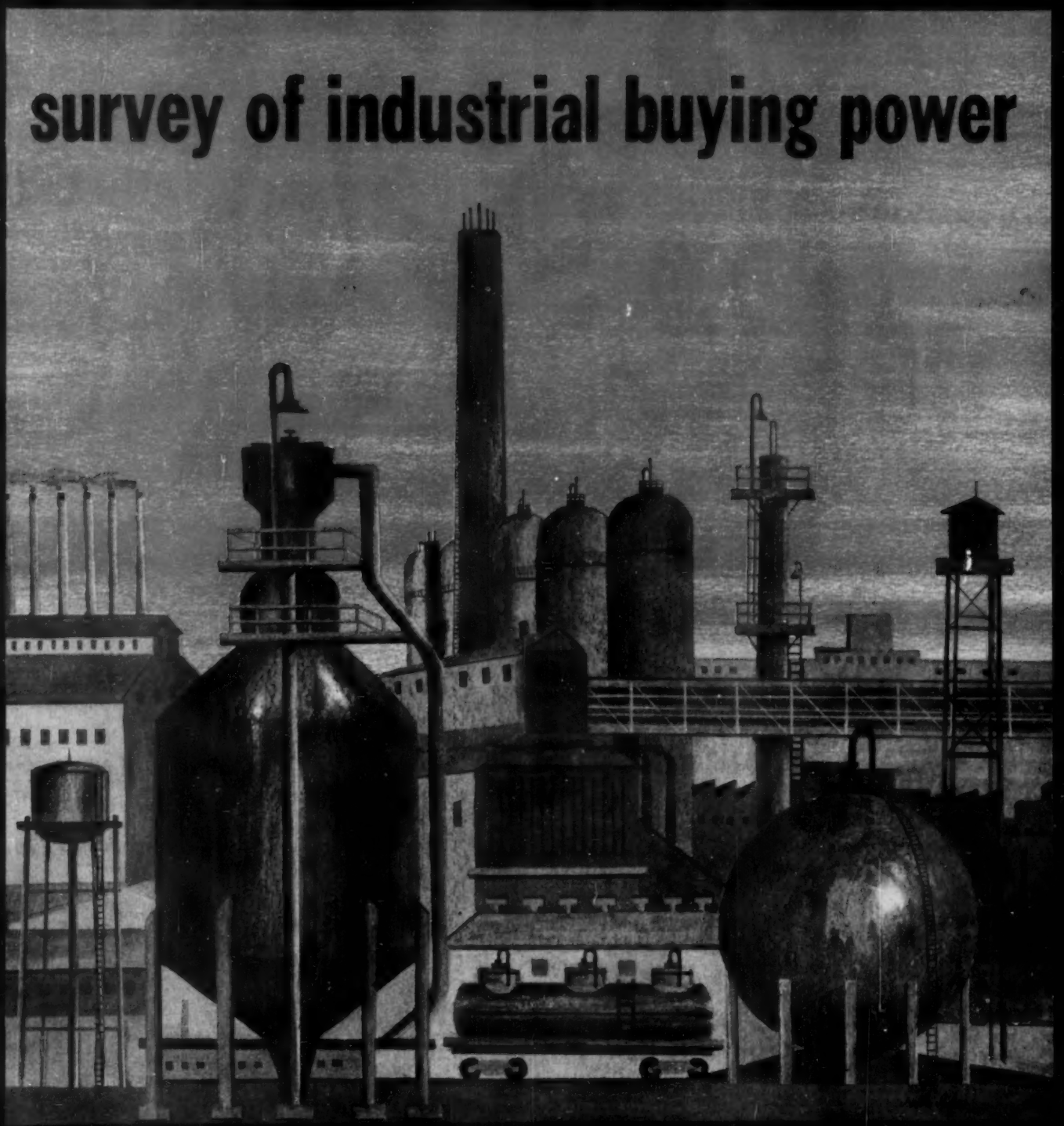
Sales Management / THE MAGAZINE OF MARKETING

survey of industrial buying power



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1

A SURVEY OF BUYING PLANS CONDUCTED AMONG COMMERCIAL LAUNDRIES

. . . Survey covers the presidents of 550 companies listed by the American Institute of Laundering as having an annual sales volume exceeding $225,000.

2

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3

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4

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. . . Nationwide survey among list of 980 companies compiled from the Modern Plastics Encyclopedia.

5

SURVEY OF BUYING PLANS CONDUCTED AMONG INDUSTRIAL DISTRIBUTORS

. . . Data on size, sales staffs, advertising, sales volume, equipment purchased, operating expenses, etc.

6

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. . . Survey conducted among 2000 subscribers of Nation's Business to learn percentages of shipping done by air, railway, truck.

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. . . Conducted among 3000 executives of leading businesses in New York, Chicago, Los Angeles.

8

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. . . Activities of businessmen as hospital board members. Survey conducted among presidents of 2000 hospital boards throughout country.

9

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. . . Handy 4-page summary of facts and figures on the Market, Editorial Coverage, Readership, Circulation, Advertising Volume of this all-business magazine.

10

INVESTMENT PRACTICES OF EXECUTIVES IN BUSINESS AND INDUSTRY

. . . Study of personal investment practices of executives in some of the largest banks, corporations, merchandising, transportation, life insurance and utility companies.

11

MOTOR TRUCK AND COMMERCIAL TRANSPORT EQUIPMENT SURVEY

. . . Conducted among 2982 customers and prospects of major truck manufacturer, to determine types and brands of motor trucks, transport equipment used.

12

READER CHARACTERISTICS OF NATION'S BUSINESS SUBSCRIBERS FROM STARCH CONSUMER MAGAZINE SURVEY

. . . Presenting facts on income, occupation, age, household possessions, etc., of Nation's Business readers based on 25,644 interviews by Daniel Starch and Staff.

13

A STUDY OF CORPORATE PERSONALITY AN APPRAISAL OF CHEMICAL COMPANIES BY BUSINESS EXECUTIVES

. . . Conducted among 500 owners, officers, managing executives of many types of businesses.

14

A STUDY OF CORPORATE PERSONALITY AN APPRAISAL BY BUSINESS EXECUTIVES OF AIRCRAFT MANUFACTURERS

. . . Includes opinions of 500 business executives in comparing leading aircraft manufacturers; covers leadership, future outlook, employment, investment, etc.

15

A RECOGNITION STUDY OF COMPANIES AND SERVICES FURNISHING BACKGROUND MUSIC FOR BUSINESS AND INDUSTRY

. . . Shows which names are best known to 500 businessmen who were asked to name companies which furnish background music service; value of corporate advertising program.

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Here are market studies which have proven helpful and valuable to sales managers, marketing men, advertising managers, and agency executives. Take a few minutes to check the titles described on the left.

The studies are recent. The findings are important. The facts are reliable. It will pay you to fill in and mail the coupon below for whatever numbers would be most useful to you. Do it now.

Nation's Business is all business to America's business owners!

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Nation's Business editorial content is comprehensive, authoritative, timely; presenting "a useful look ahead" in three basic areas of vital importance to business owners: business leadership, national issues, government problems. That is why 23,744 progressive firms purchased more than half a million useful reprints of Nation's Business articles in 1957. Every issue is profitable reading and profitable selling. Result: Nation's Business advertising is up 40% the past 2 years.

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Please send market data for numbers I have circled:

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ACTION IN BUSINESS

results when you advertise to business and industry in

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SHOW IT NOW... ABP's new how-to film on more effective selling

Show it—or see it—as soon as possible. The new ABP film, "How to Multiply Yourself" gives you invaluable aid in merchandising your businesspaper advertising to your sales staff. This full-color sound-slide presentation shows salesmen how businesspaper advertising works for them . . . how they can put it to work to step up sales efficiency . . . how to follow through on the pre-selling that means better selling and more business.

We'll be happy to arrange a private showing for you and your sales force, at your convenience. Just drop us a line. Or phone:

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Sales Management
THE MAGAZINE OF MARKETING

JULY 10, 1958 VOLUME 81, NO. 2

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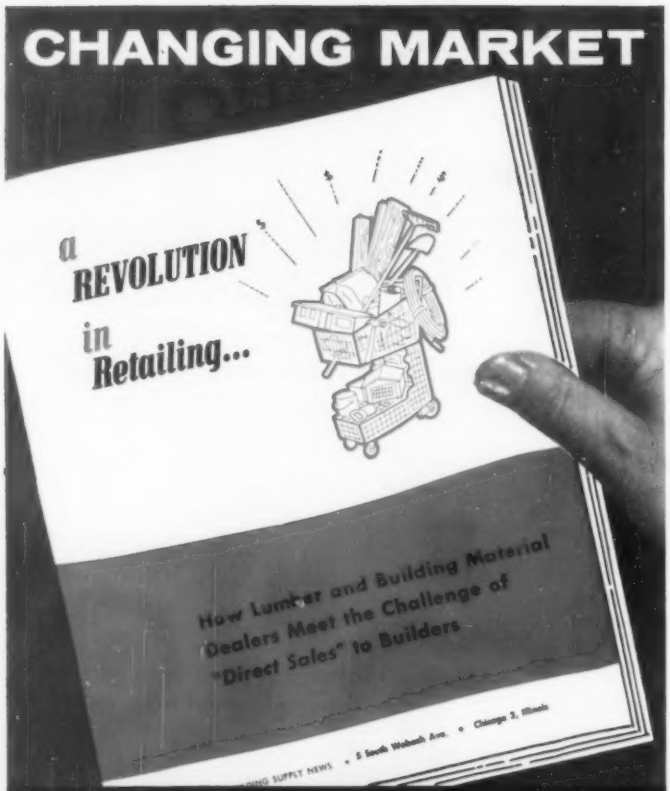
CHANGING MARKET



REQUIRED READING: if you are concerned with the manufacture, sale or advertising of building products

Here are the new techniques building supply dealers are using to maintain their position as your *No. 1 source* for builder sales.

Big changes are taking place in the builder market. Building supply dealers are aggressively developing and promoting *effective new ways* to boost volume and maintain their traditional place as No. 1 source for builder sales . . . Get the facts on this significant change in methods of "controlling" and increasing sales of building products. Write for your copy of the comprehensive and authoritative BUILDING SUPPLY NEWS report: *How Lumber and Building Material Dealers Meet the Challenge of "Direct Sales" to Builders.* Just drop us a note on your company or agency letterhead. It will be rushed to you free of charge.

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For Offices and Personnel
see Advertisers' Index

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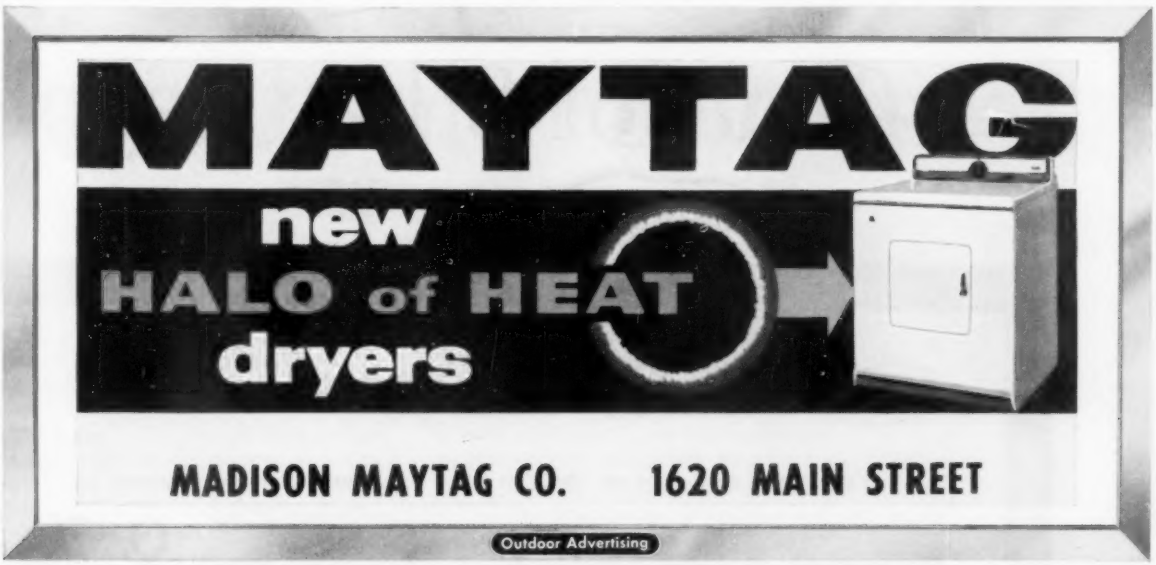
OUTDOOR'S complete sales pictures



Poster designed by Leo Burnett Company, Inc.

give Maytag powerful local impact

Ralph Nunn,
Advertising Manager,
Maytag Company, says:

"The primary purpose of all our advertising is to reach the largest audience in key markets at the lowest cost. We have found that Outdoor Advertising not only accomplishes this purpose, but gives us the added advantage of powerful *local* impact. That's why our current Outdoor program is by far the largest in Maytag's history and is being enthusiastically received by dealers all over the country."

8 out of 10 people remember OUTDOOR Advertising!*

Standardized Outdoor Advertising, 24 and 30-sheet Posters—and Painted Bulletins.

OUTDOOR ADVERTISING INCORPORATED
NATIONAL SALES REPRESENTATIVE OF THE OUTDOOR MEDIUM

OAI

60 EAST 42ND STREET, NEW YORK 17, NEW YORK · ATLANTA · BOSTON · CHICAGO · DALLAS · DETROIT · HOUSTON · LOS ANGELES · PHILADELPHIA · ST. LOUIS · SAN FRANCISCO · SEATTLE

**Urban Poster Readers—Starch Continuing Study of Outdoor Advertising*

How "U.S.News & World
6 out of 8 key people

RESEARCH FACT

Average number of executives on "decision team" *(in all manufacturing corporations)*

8.7

Average number who see the salesmen

2.4

Not covered by personal sales contact 6.3

Net paid circulation now 1,050,000

Three out of four subscribers hold managerial positions in business, industry, government, finance and the professions—a market not duplicated by any other magazine in the field.

Report" helps sell the your salesmen never see

How can you sell these 6 out of 8 important decision makers your salesmen do not get in to see? Add more salesmen? Perhaps. But costs of sales calls are high, and these 6 key people just do not see salesmen.

The answer is in the next best thing to a call by a good salesman—good advertising. You can be sure you are increasing your sales efforts among *all* the "buying decision team" executives when you put your advertising in "U.S.News & World Report."

Three out of four subscribers hold managerial positions.

"U.S.News & World Report" enjoys the confidence and respect of the people on today's business and industrial decision teams.

No other magazine so consistently receives the most votes as the magazine most useful to these key people in their work and the magazine in which they place the most confidence. We know this fact from survey after survey among leaders in all phases of business, industry, finance, government and the professions. The current surveys are available to you for the asking.

Alongside the news these key people find so useful and in which they place so much confidence, your advertising has the best chance to be seen and read by the right people, and to get results. Advertising in "U.S.News & World Report" is available at lower per-thousand costs than in any news magazine or any management magazine.

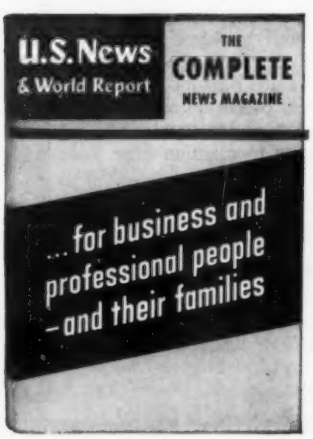
WHO IS ON THE BUYING "DECISION TEAM"

(From pages 48 and 51 of your copy of "How Business Buys")

	NUMBER OF EXECUTIVES All manufacturing corporations
Top Management*	4.9
Production Management	2.5
Marketing and Distribution Management	.8
Purchasing Management	.5
Average number of executives	8.7
AVERAGE NUMBER CONTACTED BY SALESMEN	2.4

"HOW BUSINESS BUYS," a project jointly conducted by Marketing Division, Advertising Department, "U.S.News & World Report," the Marketing Services Company of Dun & Bradstreet, Inc., and Benson & Benson, Princeton, N. J.

**Top management includes Chairman of the Board, President, Executive Vice President, Vice Presidents, General Manager, Secretary and Treasurer.*



America's Class News Magazine

Advertising offices at 45 Rockefeller Plaza, New York 20, N. Y. Other advertising offices in Boston, Philadelphia, Cleveland, Detroit, Chicago, St. Louis, San Francisco, Los Angeles, Washington, and London.

Forgive us . . .

for being proud of this second Survey of Industrial Buying Power

Perhaps it ill behooves the editor to tout this SALES MANAGEMENT *Survey of Industrial Buying Power* on a page in the same issue because, after all, it's what *you* think of the issue that counts.

Yet I can't restrain my enthusiasm for the job the staff has done and I get a particular kick out of the scoop our Dr. Jay M. Gould engineered on the employment figures for leading counties in each of the 450 Standard Industrial Classification codes.

Here was a case where a perfect gold mine of industrial data existed in government archives, but it was untapped and unworked through lack of sufficient money in the Bureau of the Census. Dr. Gould, acting for SALES MANAGEMENT, arranged to buy the Univac tapes on which were traced 1954 Census data covering manufacturing employment for all counties in the U. S. A. for the 450 S. I. C. codes.

Then came the laborious and costly process of updating all of the information to 1957 and selecting the leading counties under each code. What we are publishing is, necessarily, because of lack of space, a digest of the complete data, although for most code numbers the top 20 counties represent a substantial part of the U. S. A. total. The material not published is available to subscribers on IBM cards at a modest fee.

There are almost countless permutations and combinations of this data. For example, it is possible to sort out the cards so as to give a complete picture of plants and employment for any county or any group of counties representing a marketing area or a salesman's territory.

While we consider this detailed information on each of the 450 S. I. C. codes to be the truly outstanding feature of this second annual *Survey of Industrial Buying Power*, we also are rather proud of many of the other features, including (1) the 1957 estimates of the Value of Products Shipped for 4-digit industries made by Peter B. B. Andrews, SALES MANAGEMENT's consulting economist, and his 300-man jury (also responsible for the quarterly Future Sales Ratings); (2) the constructive suggestions made by Nathaniel R. Kidder and Francis E. Hummel on how to convert production data to industrial *consumption* data; (3) the table of state industrial directories which offers great assistance in further exploring and isolating industrial potentials; (4) the greatly expanded section on market research booklets available through publishers in the industrial field and (5) the very practical contribution by Mr. Leonard C. Yaseen of the Fantus Factory Locating Service on how to locate plants, warehouses and offices so as to take full advantage of the *marketing* possibilities of a geographic area. And there are other valuable features—too many to mention here.

The *Survey of Industrial Buying Power* is now solidly established as an annual July 10 publication and we don't think it is unduly optimistic to believe that soon July 10 will become as well known with industrial marketers as May 10 and the consumer *Survey of Buying Power* have become with makers of consumer goods and services.

PHILIP SALISBURY
Editor and Publisher

Why PURCHASING Magazine is your best buy

Editorial service

The editorial staff of PURCHASING, with over a century of purchasing know-how, has contacts and experience unequalled in its field.

Industrial coverage

PURCHASING now has a circulation of 28,000. Its company-by-company survey of buying power assures coverage of new companies and important branches as purchasing is decentralized.

Metalworking coverage

Over 72% of PURCHASING'S circulation is concentrated in the all-important metalworking industries. Top coverage of a prime market.

Established readership

PURCHASING Magazine is far ahead in independent readership surveys among purchasing people. It ranks near the top among *all* industrial magazines. Full details available on request.

Advertising

PURCHASING by far carries more advertising, by far more advertisers, than any other publication in its field. Complete list of advertisers by product available on request.

Advertising value

Measure PURCHASING'S value by *any* standard – circulation, proved readership, editorial standards, ad pages carried – and you'll find it *the* top advertising value. Ads in PURCHASING get intense readership over a two-week period.

Why purchasing men read PURCHASING

Purchasing is a job that takes a lot of know-how. *How* to control inventories. *How* to set up good systems. *How* to keep costs down. *How* to make a value analysis study... these are the methods and procedures that make purchasing scientific.

What makes purchasing important

For every dollar the average manufacturer takes in, 52 cents is spent for materials, equipment, supplies and services.

This HOW information is what makes up the bulk of the editorial content of PURCHASING Magazine. First and foremost, PURCHASING is a *methods magazine* for industrial buyers.

While a purchasing agent buys at a price, he buys *in a trend*. Anybody can check a market, get the price of any product, but in modern purchasing the important thing is *when* to stock up, or *when* to reduce inventories. This calls for *trend* information.

PURCHASING Magazine goes all out to help purchasing executives figure *when* to buy. *Pulse of Business* reports economic trends as released monthly by major sources. Every other issue carries regional reports on business conditions. *Washington Report* is just as useful in interpreting news in a way that reveals *trends* in national and international affairs... in a purchasing man's own language.

Ads in PURCHASING tell what to purchase

The editors of PURCHASING provide the methods and trend information purchasing men need, as well as news of new products and new processes. This gives advertisers in PURCHASING the opportunity to provide additional information about products and services. Purchasing men say they consider advertisements a primary source of product information.

PURCHASING'S CIRCULATION AS OF JUNE 1958

SIC	INDUSTRY	CIRC.
19	Ordnance	150
20	Food	700
21	Tobacco	20
22	Textiles	270
23	Apparel	70
24	Lumber	160
25	Furniture	200
26	Paper	470
27	Printing	280
28	Chemicals	1,200
29	Petroleum Products	320
30	Rubber	250
31	Leather	80
32	Stone, Clay & Glass	430
33	Primary Metals	1,050
34	Fabricated Metal Products	3,390
35	Machinery	6,700
36	Electrical Machinery	3,700
37	Transportation Equipment	3,000
38	Instruments	830
39	Misc. Manufacturing	320
	Mining, Construction, Transportation, Communications, Utilities, Industrial Distributors, Government, Education and all others	3,000
	Single copy sales; file, sample and checking copies	1,450
	TOTAL DISTRIBUTION	**28,040**

HIGH RENEWAL RATE PURCHASING'S renewal rate is over 81%, one of the highest among business publications.

BPA ABP

PURCHASING *Magazine*

205 East 42nd Street, New York 17, New York

a Conover-Mast publication

the methods and news magazine for industrial buyers

3 points to remember

WHEN YOU PLAN YOUR ADVERTISING

1. By using the trade and industrial press, you reach customers and prospects when they are thinking about business . . . looking for the things you have to say and sell . . . most receptive to your message.

2. Chilton's 16 trade and industrial magazines cover their respective fields with authority, editorial excellence and quality circulation that earn the confidence of readers and advertisers alike.

3. With the wide acceptance of Chilton trade and industrial publications goes proportionate selling power.

DEPARTMENT STORE ECONOMIST . . . the magazine of department store merchandising and management.

THE SPECTATOR . . . the authoritative magazine for home office and field officials in every type insurance company.

OPTICAL JOURNAL AND REVIEW OF OPTOMETRY . . . the outstanding publication serving the optometric profession and optical industry.

THE IRON AGE . . . the national weekly serving the rich metalworking industry.

JEWELERS' CIRCULAR–KEYSTONE . . . edited for and in the interest of retail jewelers across the nation.

AUTOMOTIVE INDUSTRIES . . . the industrial newsmagazine of automotive and aviation manufacturing.

HARDWARE AGE . . . delivering fresh, informative news and features to hardware dealers and wholesalers.

BOOT AND SHOE RECORDER . . . the authoritative publication of the shoe business edited for retail merchants and buyers.

MOTOR AGE . . . published and edited specifically for the man who buys in the automotive service industry.

DISTRIBUTION AGE . . . the only magazine covering the field of physical distribution, integrating materials handling, warehousing, transportation and industrial packaging.

GAS . . . the magazine specifically edited to reach the men who control and influence the buying within the natural gas industry.

COMMERCIAL CAR JOURNAL . . . reaching the most concentrated collection of buyers in the truck and bus fleet industry.

BUTANE-PROPANE NEWS . . . the pioneer liquefied petroleum gas publication, known as "Headquarters for L.P. Gas Information" since 1931.

HARDWARE WORLD . . . providing complete coverage of the retail and wholesale hardware trade in the 11 Western states.

ELECTRONIC INDUSTRIES . . . furnishing authoritative information and interpretation of new developments and products for top-level engineers in the electronic-TV-radio market.

AIRCRAFT AND MISSILES MANUFACTURING . . . the magazine devoted exclusively to the manufacturing phases of the aircraft and missiles industry.

Chilton

COMPANY

Chestnut and 56th Streets • Philadelphia 39, Pennsylvania

How many publications on your list can answer these 2 all-important questions?

1. How many plants they cover use your particular type of product?
2. How many readers in these plants influence the buying of your product?

MILL & FACTORY is *one* publication that can give you the answers to both these questions.

We believe that advertisers of industrial products are entitled to demand the same kind of "product warranty" on the publications they use that they give their own customers and prospects. MILL & FACTORY's Product Use and Reader Buying Influence Study was based on 5,641 responses—almost 10% of its present plant readership—far beyond the demands of a fair research sample. It tells how many MILL & FACTORY plants use products like yours and how many MILL & FACTORY readers influence their purchase. The study further shows by S.I.C. numbers the kinds of plants and occupational groups that participated. Extreme care was taken to ensure accuracy of the study by having it conducted and authenticated by the Ross-Federal Research Corporation. Opportunity for overstatement was carefully avoided —rather tending toward opportunity for understatement.

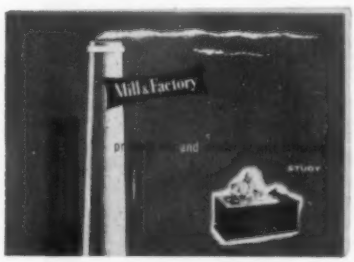
High Average Buying Influence.

In this respect it is interesting to note the consistently high average indication of buying influence among respondents, disclosed by the study. This, of course, is a direct result of the Franchise-Paid circulation method used by MILL & FACTORY. This method ensures that the publication go *only* to readers who have the power to initiate requisitions, to specify, to buy.

Here's How It Works.

MILL & FACTORY builds and maintains its circulation through 1,724 industrial salesmen who can personally identify and enter the subscriptions for the men they must sell . . . who personally cancel the subscriptions of those who no longer have the power to buy . . . not at the end of a subscription term of three, two, or even one year but with the very next issue of MILL & FACTORY.

These 1,724 salesmen are employed by 146 leading industrial distributor organizations. These salesmen identify and sell the men who must be sold on products like yours, whether you sell direct or through distributors.



Product Use and Reader Buying Influence Study

For a copy of the study or further information on additional breakdowns in industry by S. I. C. numbers, on specific products, write, wire or phone your nearest MILL & FACTORY representative.

Mill & Factory is the only single publication edited 100% for the men known to be directly responsible for the methods, equipment and supplies used in Production and Maintenance.

Mill & Factory

NBP BPA

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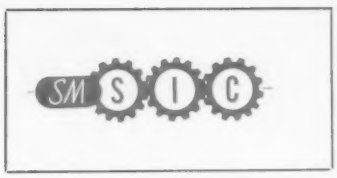

Sales Management

Survey of Industrial Buying Power

JULY 10, 1958

In this issue —the second annual issue devoted entirely to industrial marketing—the editors of SALES MANAGEMENT offer with pride the most precise measures for pinpointing specific industrial markets ever presented in print: namely, 4-digit S. I. C. data on both national and county levels.

Thus in addition to the 2-digit county data presented in previous editions of the *Survey of Industrial Buying Power*, we have succeeded, for the first time in history, in ranking for each of nearly 450 separate industries, as defined by the Census Bureau's official Standard Industrial Classification, the counties leading in employment in that industry in 1957. One need not be an experienced researcher to know what a boon this will mean to industrial marketing. The industrial supplier is concerned generally with plants whose needs are highly specialized. The 4-digit S. I. C. classification offers the most specific specialized definitions available. (Some of these definitions are so specific that, as in the case "Hatters' Fur," code number 2284, it takes only two counties to account for 26 of 30 plants reported for the industry.) And for each of these industries we show the number of plants and total employment for the top 20 counties. In most cases, the top 20 counties will account for more than half of total employment, but the precise ratio of coverage will vary from industry to industry.

The reason why this information has never before been available is that when you are operating on so specialized a level you are frequently dealing with counties with only one or two plants, and the Census Bureau is forbidden by the non-disclosure rule to offer any precise indication of the size and operation of such plants. In recent years, however, the Census Bureau has accepted the principle that it may reveal the *existence* of such plants within certain broad size classifications and the Bureau will in time release such data on a county basis.

The SALES MANAGEMENT research staff, not working under the Census Bureau's legal limitation, has taken such data, and with the generous cooperation of local chambers of commerce, planning agencies, postmasters, etc., has succeeded in assigning to each plant an actual 1957 estimate of employment. Thus, if it is known for example that in Cumberland County, New Jersey, there exists a large plant with over 1,000 employes in S. I. C. 2037 (Frozen Fruits and Vegetables), it is not too difficult for us to ascertain from local sources what the Census Bureau can not disclose, namely, that this must be the Seabrook Farms Company, with about 1,400 employes. In this respect however SALES MANAGEMENT is capitalizing on the prestige and authority built up by the *Survey of Buying Power* over a 29-year period, during which local agencies have come to respect the ability of the *Survey* to offer fair representation of the economic importance of local areas. Consequently, the cooperation of thousands of chambers have enabled us to pinpoint specific plants to a degree that other private or even governmental bodies would find it difficult to match.

With their help, our staff has spent the past year in building up a network of economic intelligence that constitutes our own "Census of Manufacturing."

Significance of New County 4-Digit Data

These tables will greatly facilitate estimates of industrial potentials on an area basis for industrial suppliers who know what industries they serve, and their relative importance, but have never been able to locate the plants in that industry. For example, consider the very first ranking table—S. I. C. 2011, or Meat Packing. It is fairly well known that Cook County, Ill., is the nation's leading meat packing center, but probably very few people would know that the second ranking county is Douglas, Neb., followed by Dakota, Minn., etc.

The S I C – What It Is

A new Standard Industrial Classification Manual has been issued with new revisions of classifications to take effect in the 1958 Censuses. However, no Census data will be available for these new definitions until 1960, so that discussion of the new definitions in advance of new Census data may be confusing. In a forthcoming issue, SALES MANAGEMENT hopes to publish an article showing the quantitative relationships between old and new definitions for manufacturing.

S.I.C. stands for the Standard Industrial Classification, a numerical system set up by the Federal Government to classify different segments of industry by products.

It is presented in great detail in: Standard Industrial Classification Manual, Volume I, "Manufacturing Industries," Superintendent of Documents, United States Government Printing Office, $2.25.

An industry can be classified on either a 2-, 3,- or 4-digit basis. The more digits the finer the classification. Examples of 2-digit classifications are: Food and Kindred Products, 20; Tobacco Manufacturers, 21; Primary Metal Industries, 33, etc. As the table below indicates, there are broad categories (from 19 to 39) covering all manufacturing industries. Each of them is refined into 3- and 4-digit categories.

Let us examine a particular 2-digit category. 20 is Food and Kindred Products. Within it you find 3-digit groups, such as 201, Meat Products; 202, Dairy Products; 205, Bakery Products, etc. The 3-digit classifications are further refined into 4-digit groups. Dairy products, 202, for example, breaks down into 2021, Creamery Butter; 2022, Natural Cheese; 2023, Condensed and Evaporated Milk.

Examples of the Standard Industrial Classification

Two Digit	Title	Three Digit	Title	Four Digit	Title
19	Ordnance and accesories				
20	**Food and kindred products**	201	Meat products		
21	Tobacco manufactures	**202**	**Dairy products**	**2021**	**Creamery Butter**
22	Textile mill products	205	Bakery products	**2022**	**Natural cheese**
23	Apparel and related products			**2023**	**Condensed and Evaporated Milk**

The S.I.C. used by: Sales Management's Annual Survey of *Industrial Buying Power* . . . Dun & Bradstreet . . . McGraw-Hill's "Industrial Market Planning Work Book" . . . *The Iron Age's* Market Data Books . . . *Steel's* "Census of Metalworking" . . . The Census of Manufacturers . . . and other groups throughout Government and private industry.

Let us suppose that you are a manufacturer of refrigeration equipment suitable for meat packers and that the industry demand for your equipment might come to $1,000,000. Since there are nearly 50,000 employes in meat packing, this comes to a ratio of $20 per employe. By applying this ratio to our employment totals in each county, you will emerge with a set of potentials that will help you determine sales quotas, promotion budgets, where to add or shift salesmen and similar operational moves. The same procedure can be followed for each 4-digit industry you serve. The editors of SALES MANAGEMENT have reason to believe that the results of this simple procedure can be little short of sensational in tracking down new markets.

Behind every one of our figures lies a tremendous job of selection and estimation. If we say, for example, that in Sedgwick County, Kansas, there are six meat packers with a total employment of 2,600, you can rest assured that those are real plants, despite the fact that your own sales force may never have been aware of them. Actually, we have checked the possibility of there being—for each of 450 industries—one or more plants, regardless of size, in each of 3,000 counties, and have then ranked the results in each of the industries. Some idea of the magnitude of our original pool of data can be gained from the fact that they are contained on 15 spools of Univac tape or the equivalent of a roomful of IBM cards. Space limitations enable us to show the results for only the top 20 counties in each industry, but interested parties can secure complete industry tabulations for a nominal charge.

Some Analytical Findings

Since these tables have never before been available, they embody many surprises for those interested in the location and dispersion of American industry today. Consider the table on the opposite page summarizing the top county in each of the 4-digit food industries and note the wide degree of dispersion indicated here. How many people know that Hall County, Ga., is the leading poultry dressing county in the nation? That Jefferson, Ky., leads in creamery butter; Dodge, Wis., in natural cheese; Stanislaus, Calif., in concentrated milk, and so on?

Tables Lead to Plant Identity

Again, consider the startling implications of our ranking for S. I. C. 2819 (Inorganic Chemicals, NEC), page 112, which indicates that the six atomic energy plants in the top five counties of Aiken, S. C., Benton, Wash., Roane, Tenn., Bernalillo, N. M., and Anderson, Tenn., today account for 40% of all employment in this industry. Now, this is a fact that could not have been revealed officially, because the data would be classified (though a matter of common knowledge to informed local sources), and because of the Census Bureau's non-disclosure rule for single plants.

There are undoubtedly experts in

particular fields to whom some of these tables will come as no surprise—men in the paint industry, for example, who will immediately identify Midland, Mich., the leading county in S. I. C. 2822 (Intermediates and Organic Colors) as the home of Dow Chemicals. Our tables will help everyone become equally expert in naming the plants indicated in the data. Take the case of the single 3,500-employe plant in Dauphin County, Pa., that dominates the chocolate and confectionery industry. The most cursory investigation will show this must be the Hershey Company. The fact that a single plant in Queens County, N. Y., with 1,200 employes dominates the chewing gum industry points to the importance of American Chicle.

In fact, the editors of SALES MANAGEMENT have developed a quiz involving 25 industries dominated by single large plants. (See box on page 41 for the clues. The answers will be found on page 78.) It serves to dramatize the significance of the ranking tables and will probably reveal gaps in industrial marketing background. For example, many informed executives will know that the large plant with 4,100 employes in Blount County, Tenn., indicated in S. I. C. 3352 (aluminum rolling and drawing) must be Alcoa, but how many will know that the large Cutlery plant with 2,300 employes in Suffolk, Mass. (S. I. C. 3421), is the Gillette Co.? A knowledge of S. I. C. definitions is important here. How may these plant names be secured? In most cases a letter to the local chamber of commerce or postmaster, or a few minutes with an industrial directory, will provide the information. Our tables direct your attention to the right county in the right industry. We cannot give plant names for reasons of space, but we supply all the tools necessary for every industrial reader to start assembling his own list of prospects' names by concentrating on those relatively few counties which we show to be worth special attention. Readers may check their lists of names with us for 100% coverage. In your search for plant names, however, don't overlook the analytical importance of the employment data we show here. It is the first sign post in the search.

We again ask our readers to report to us their experiences in using these tables. It was precisely this kind of reaction that helped us decide last year that 4-digit county data represented the most pressing single requirement in industrial marketing today, and we hope that similar advances in the future will flow out of reader response to our current issue.

Also included in the 1958 *Survey of Industrial Buying Power* is the most comprehensive round-up, analysis and up-to-date estimate available of 4-digit industry national data, in or out of

DO YOU KNOW THE NO. 1 FOOD COUNTIES?

The tables in this issue "embody many surprises for those interested in the location and dispersion of American industry today." See text on opposite page.

S.I.C. Code	Industry	County	Plants	Employment (Thousands)
2011	Meat Packing	Cook, Ill.	29	17.9
2015	Poultry Dressing	Hall, Ga.	6	1.4
2021	Creamery Butter	Jefferson, Ky.	3	.5
2022	Natural Cheese	Dodge, Wis.	51	.6
2023	Concentrated Milk	Stanislaus, Cal.	5	.7
2024	Ice Cream & Ices	Philadelphia, Pa.	13	2.6
2027	Fluid Milk & Other Products	Los Angeles, Cal.	49	5.2
2031	Canned Seafood	Los Angeles, Cal.	11	3.2
2034	Dehydrated Fruits & Vegetables	Santa Clara, Cal.	18	1.8
2035	Pickles & Sauces	Cook, Ill.	29	1.5
2036	Packaged Seafood	Glynn, Ga.	3	.9
2037	Frozen Fruits & Vegetables	Cumberland, N. J.	1	1.4
2041	Flour & Meal	Erie, N. Y.	8	2.2
2042	Prepared Animal Feeds	Erie, N. Y.	19	2.1
2043	Cereal Breakfast Foods	Calhoun, Mich.	6	6.1
2044	Rice Milling	Harris, Tex.	6	.9
2045	Flour Mixes	Cook, Ill.	16	1.3
2052	Biscuits & Crackers	Queens, N. Y.	3	2.5
2061	Raw Cane Sugar	Hawaii, Hawaii	14	2.9
2062	Cane Sugar Refining	Philadelphia, Pa.	2	2.6
2063	Beet Sugar	Monterey, Cal.	1	.7
2071	Confectionery Products	Cook, Ill.	107	13.2
2072	Chocolate & Cocoa Products	Dauphin, Pa.	1	3.5
2073	Chewing Gum	Queens, N. Y.	1	1.2
2081	Bottled Soft Drinks	Cook, Ill.	58	2.5
2082	Beer & Ale	Milwaukee, Wis.	6	9.4
2084	Wines & Brandy	Fresno, Cal.	23	1.0
2085	Distilled Liquor	Jefferson, Ky.	15	4.4
2091	Leavening Compounds	Westchester, N. Y.	2	.4
2092	Shortening & Cooking Oils	Cook, Ill.	10	1.1
2093	Margarine	Marion, Ind.	1	.4
2094	Corn Wet Milling	Cook, Ill.	2	2.9
2095	Flavorings	Cook, Ill.	53	1.6
2097	Manufactured Ice	Cook, Ill.	21	.6
2098	Macaroni & Spaghetti	Kings, N. Y.	13	.7

Government. To the 417 Census-coded, 4-digit industries on which we carried 1956 estimates last year, we are this year adding 31 industries, for a new total of 448 industries now covered in the 4-digit category.

Lack of 1954 Census-base figures created problems in relation to such important 4-digit industries as blast furnaces of steel mills, primary copper, primary lead, motor vehicles and parts, refrigeration machinery, wines and brandy, finishing wool textiles, thread mills, full fashioned hosiery mills, knit underwear, knit gloves and mittens and wool carpets and rugs. We felt they should be included here, so we obtained estimates for them by surveying the 307-man Board of Analysts of Future Sales Ratings and developing a mathematical consensus for each industry.

Supplying a 1954 Base

The absence of this 1954-base information arose logically from the nature of the industries involved and the essential procedures of the Census Bureau. It would include overlapping data reported by related industries engaged in successive fabrication stages of a product's manufacture and would lead to excessive duplication in overall summations, such as our value of shipments, which might be based on this information.

Such duplication, however, is not significant within the 4-digit range of industries covered in this survey, with the exceptions largely of the ones mentioned above. In the Board of Analysts estimates the inevitable overlap with related industries is believed not to exceed 25% in any instance.

This process included checking by Government economists and statisticians, and the average percentage changes also had the benefit of judgment by private industry experts. The final detailed figures, while estimates, are as soundly and extensively based as possible, and represent the only available current figures of their kind anywhere in this comprehensive industrial series.

In the statistical tables, the 3-digit totals necessarily are not shown, since they would be distorted by an unavoidably high degree of duplication.

The term "value of shipments" represents net selling value, f.o.b. plant, after discounts and allowances, of all shipments of products from manufacturing establishments of an industry, plus receipts for miscellaneous activities of such plants. It excludes freight charges and excise taxes.

Products transferred to other establishments of the same company (such as other manufacturing plants, separate sales branches, or retail dealers) are valued at the nearest approximation to the commercial selling value, f.o.b. plant, and not the cost of production.

Accordingly, it should be noted that for establishments classified in a given industry the value of shipments includes not only (a) their value of products primary to the industry, but also (b) their value of secondary products (which are primary to other industries), and (c) their miscellaneous receipts for repair work, sales of scrap, installation of own products, receipts for contract work, etc. Excluded from the value of shipments, however, are sales of products bought and resold in the same condition.

In like manner, the tabulation of young industries with their greatest growth ahead (see box on page 80) was developed through the Board of Analysts by averaging the estimates of the progress made in developing the industries' annual sales potentials.

Another important body of data to be found in this issue presents the 2-digit rankings of 100 leading counties, according to 1957 employment. This is the sixth successive year that we have been able to offer such data, available nowhere else. These estimates are projections made with the help of local chambers and state employment departments of original benchmark data developed from the 1947 and 1954 Censuses of Manufactures.

We also offer rankings for the following seven non-manufacturing industries: mining; contract construction; public utilities; wholesale trade; retail trade; finance, insurance and real estate, and services. Together with the total for all manufacturing industries, these rankings are based on the social security employment and payrolls data for counties for the first quarter of 1956 scheduled for official release some time in September of 1958. The material on IBM cards had been made available to the SALES MANAGEMENT research staff in time for publication in this *Survey of Industrial Buying Power.*

The Census of Manufactures in 1947 and 1954 provided information on the number of plants in each 2-digit class in three size categories (employment under 20, from 20 to 99, and over 100), but very little data on actual employment outside the larger metropolitan areas. Working from this base, we have succeeded in assigning to each plant reported by the 1954 Census an average employment figure for 1956.

Since manufacturing is highly centralized, there are countless numbers of cases where the activity of a single county is accounted for by one firm or a pairs of firms, and consequently will not show in Census publications.

Our estimates of county employment for the 4-digit S. I. C. industries were made on a similar basis, but here we were able to work from an original pool of Census data in which the size of plants was broken down into seven different groups rather than three, permitting a far higher order of accuracy in making our 4-digit county estimates of employment.

In the case of our 2-digit estimates, our starting point was a tabulation of 1947 and 1954 Census of Manufactures data which showed, for each county in the United States, the number of plants in each of three different size-categories, for twenty industrial classifications. For each of these 180,000 "cells," our research staff prepared estimates of the average number of employes. These estimates were based on a series of studies, for each industrial group, of the variation in the size of plant. The results were checked against Census published data and refined with the use of employment and payroll data taken from Social Security tabulations, which in some aspects offer more detailed information than the Census. But the most fruitful source of county employment estimates have been chambers of commerce and postmasters, whom we poll annually for industrial data, and the various state employment commissions.

Typical Applications

All the data developed at each stage of the inquiry have been transferred to IBM cards or to Univac tape and are consequently available for special industrial market analyses.

Industrial suppliers can use these county rankings for both 2-digit and 4-digit industries and the data on which they are based to establish sales quotas in precisely the same manner that the *Survey of Buying Power* tables for population, sales, and income are used for consumer marketing problems.

One note of caution must be sounded. Consumer markets are far more stable than industrial markets.

Turn to page 80

for the continuation of this article, which will be followed (page 83) by the SM S.I.C. tables —Leading Counties in Employment in each 2-digit industry; Gross Sales for the 4-digit classifications in each major group, and Employment by Leading Counties for each 4-digit classification.

Aviation Week

Including Space Technology

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New York, N. Y. — The Aviation industry will be a $12 billion market in 1958 according to AVIATION WEEK's 25th Annual Inventory of Airpower Edition. Breakdown for spending indicates the following:

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$3.3 billion for guided missles and related equipment

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$1 billion for commercal aircraft delivery

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How to Find Industrial Prospects

IN SEARCH OF INDUSTRIAL BREAKTHROUGHS: The special reports on these and the following pages were sparked by views expressed at this special panel called by the editors of SALES MANAGEMENT April 11 at the Waldorf-Astoria Hotel in New York. Views of panel members proved so exciting that the National Industrial Advertisers Association called upon the moderator and the panelists to present their material in a full-hour, slide-illustrated session as part of the NIAA convention program in St. Louis June 6.

Consider These Areas in Market Planning

Says Panel Chairman RICHARD C. CHRISTIAN, executive vice-president, Marsteller, Rickard, Gebhardt and Reed Inc.:

Before you can create profitable customers you have to find the prospects in the first place. So, to us, this seems like a logical place for marketing planning to begin. What are the marketing techniques most useful in helping us find industrial prospects?

Our basic objective, of course, is to increase sales and profits. First, the industrial company can plan its marketing efforts around obtaining an increased share of business from its present customers. This, normally, is a continuing sales objective of most firms.

Second, it can find and convert prospects into customers by targeting its efforts toward established markets in which it now operates.

There isn't a company which does not have in its established markets major prospects which could be converted to customers with timely and imaginative marketing.

And certainly, a third big reservoir of hidden prospects lies in those undeveloped and little tapped markets and industries which are available to all companies. Prospects abound in fringe or secondary markets to which little previous selling pressure has been put.

There are two ways to find industrial prospects. The *informal* or "seat of your britches" method and the so called *formal* technique.

Well-refined marketing research methods can help you locate prospects, can identify them for you, categorize them, and even list them for your sales department to pinpoint its personal selling. The research way to finding prospects can be the basis for your target and selective selling and advertising. It is this formalized marketing research approach we shall discuss. It is this method we recommend to you.

HUGH BRITTON, Director of Census, McGraw-Hill Publishing Co. reveals:

How to Use S.I.C. to Identify Your Industrial Prospects

- **Basic data sources (to supplement sales records)**
- **How to classify prospects by size**
- **How to identify not only a plant's primary product but all other products**

There are two primary ways in which S.I.C. is used in industrial marketing. One is the statistical approach, aimed at finding out where prospects are located geographically and by industry. The other is as a means of identifying specific prospects.

For the first there are a number of fine sources. Basic, of course, is the data published every five years as a result of the U. S. Census of Manufacturers. Then the Census Department produces the annual surveys in non-Census years which give considerably less detail but which are helpful. County Business Patterns from BOASI is another fine source. The estimates of employment based on Census figures, produced by SALES MANAGEMENT'S *Survey of Industrial Buying Power*, are more up-to-date than either of the other sources and have proven very helpful to many people.

Often identification in statistical measure is sufficient—you need go no further. If you do wish to go further, the problem becomes considerably more complex. Even here though, the complexities can be reduced markedly if the sources I've mentioned are first analyzed for all the information they can impart.

The big thing to remember is that industries are concentrated geographically and by plant size. A study of this concentration in the industries of interest to you will vastly reduce the

PANELISTS ABOVE: back to camera, Philip Salisbury, editor and publisher, Sales Management, and founder of the Survey of Buying Power. Around table (l-r): John H. Caldwell, managing editor, Sales Management; Alfred Hong, assistant director of research, Survey of Buying Power; Oliver Johnson, director of research, The Iron Age; Hugh Britton, director of Census, McGraw-Hill Publishing Co.; Panel Moderator (center) Richard C. Christian, executive vice-president, Marsteller, Rickard, Gebhardt and Reed, Inc.; S. F. Marino, promotion director, Steel magazine; Dr. Jay M. Gould, director of research, Survey of Industrial Buying Power and Survey of Buying Power; Arthur H. Dix, vice-president in charge of research, Conover-Mast Publications, Inc.; and Robert C. Nicholson, associate managing editor, Sales Management.

amount of work necessary for identification of specific prospects.

As you're all aware it's the big plants in every industry which make the market.

For example, let's take Major Group 35—Machinery (except electrical). In this industry only 12% of all the plants have 100 or more workers, yet they account for 80% of all the employment in the industry, 80% of all the value added, 80% of all the capital expenditures.

To do the best marketing job, it is vital that you know in detail about such of these plants as may be in your market. The 1954 U. S. Census of Manufactures added a feature called the specialization ratio with which most of you are probably familiar. This is simply a measure of the proportion of the dollar sales of any particular establishment which comes from products classified in the same S.I.C. industry as that which includes that plant's principal product. The statistics are very revealing. In our sample industry, Machinery (except electrical), full data are given on 32 of the 41 four-digit industries. These account for 15,457 plants of all sizes. 24% of all these plants have a specialization ratio of less than 90% . . . which simply means that more than one out of four get more than 10% of their dollar volume from products classified outside their major industry. When these are analyzed by size, the picture is even more striking. Only 24% of the plants employing fewer than 100 people are below the 90% ratio, but 45% of all the plants employing more than 100 are in that category.

These 4,104 plants . . . small, medium and large . . . which specialize less than 90% produce 46% of all the product value of the industry—a matter of something over seven billion dollars.

If all of these plants were right at the 90% mark, it would mean that at least three-quarters of a billion dollars of products other than those defined as the principal products are produced in these plants. Of course they are not all anywhere near 90%. Some of them are in fact well under 50% in specialization.

Actually, the statistics in the 1954 Census show that secondary products of companies classified in S.I.C. 35 were in 1954 worth more than $2,980,000,000—a nice round sum equivalent to the annual sales of most of the companies you represent.

All of this points up one tremendously important fact about industrial marketing. That is just this: The larger the plant, the less likely it is to produce only products which can be confined in the narrow limits of a single 4-digit S.I.C. And remember that a product accounting for 10% of the sales of a company selling $20 million annually is just twice as important as a product accounting for 100% of the sales of a million-dollar-a-year plant.

Just how widespread are the diversities in products manufactured in a single plant? Some examples:

Telectron Co. down in Florida makes three product lines: deflection yokes (an electronic part), electric garage door openers and "Lady-Like Shoes" (play shoes for little girls to wear to keep them from ruining Mama's good ones).

Tennessee Products and Chemical Corp. in Tennessee with a principal product of pig iron: This plant also produces charcoal, acetic acid, methanol, wood oils and a smoke flavor that will make your hamburgers taste just swell.

Then there's a plant in Vermont whose primary business is making tombstone stock and marble veneers. They also make canning machinery. There's a well known maker of 5¢ candies which in the same plant produces magnetic amplifiers. A lumber mill in Maryland cans tomatoes in season. These are extremes. That's why I picked them. But they are not as unusual as you might think.

For example, we analyzed the products of 1,000 plants, taking them from a portion of an alphabetical list of plants about which we have full information. This list covers all industry and all sizes of plants from 20 employes up. A different picture would be obtained if a more restricted list were used.

Of these 1,000 plants, 571 produce products classified in a single 4-digit industry, 429 make multiple products. These 43% of the plants average 2.64 products per plant (with products here meaning 4-digit industries). 194 of these plants make products in more than one 2-digit major group with an average of 2.36 major groups. Stated another way, these plants in the aggregate produce products in 1,804 four-digit industries. The multi-product companies account for 1,233 of this total. The 19% who produce products in more than one major group account for 35.7% of all the major groups covered.

We at McGraw-Hill feel that to do the optimum marketing job, principal product is not enough. We feel that it is essential to know more about the output of each sizable unit of American industry. We find out and we use S.I.C. not only to code the product indicated as the principal one, but to code all the other products too. We suggest to you the desirability of following suit in your own research and marketing activities. It requires more work. It removes some of the sweet simplicity of the single product method but, well done, it can give you much better definition of your market, much more thorough identification of your individual prospects.

ARTHUR H. DIX, Vice-President in Charge of Research, Conover-Mast Publications, Inc., shows:

How to Use Market Yardsticks

- **Ways to overcome a salesman's fear of being measured**
- **Special problems of industrial distributors**
- **How to judge values of your territories**

Surprisingly few industrial marketers have taken the trouble to figure out how much business they can reasonably expect from the different parts of their market. And this is in spite of the fact that whether you sell to industry through your own salesmen, through distributors, or manufacturers agents, it is pretty well agreed you are likely to sell more if you put up a fair target to shoot at.

Recently a cross section of leading industrial distributors were asked, "Do you like the manufacturer you represent to furnish you with sales quotas?"

The majority registered a vigorous "Yes," and added such comments as these:

"Manufacturers are missing a bet. Quotas work very effectively."

"A sales quota is a goal to attain and acts as a stimulant to greater sales efforts."

Then why don't more industrial marketers work out sales targets?

If you ask that question, you get such answers as these:

"O.K. in some fields. But our field is different."

"Too complicated—too expensive to work out."

"Our salesmen—or distributors—don't like quotas."

That's what they say. But when you dig in you find that the real reason is based on a fear of yardsticks, plus a suspicion that the unknown factors are so many that the yardsticks couldn't even be passably accurate. That suspicion may have been warranted 10 years ago—but, in most cases, not today with the many reliable market-measuring tools available.

More and more industrial marketers are applying these tools and are using them with considerable success.

Whose job is it to analyze your market? Obviously, the better you know a market the better you can advertise to it. So let's say the advertising manager fits it in with his other many responsibilities. It fits in smoothly and usually doesn't take a lot of time.

Where do we begin?

What we call the "national market" is, of course, simply a collection of local markets. So let's start out with regions. How much of our business should come from the Pacific Coast, from the Middle Atlantic area, from New England, the South, and so on?

The simplest yardstick is manufacturing employment. If your market happens to line up with the industrial market as a whole, about one-tenth of your sales should come from the Pacific Coast, 28% from the East North Central area, 12% from the South, and so on.

That's certainly simple enough. Probably too much so. The chances are your kind of product has far greater sales per 100 employes in some industries—say metalworking—than in others. This being so, you work out your own market pattern, using manufacturing employment figures as a yardstick.

This isn't hard to do, as you can get the figures from any number of sources—for regions, states, trading areas, counties—divided into S.I.C. groups. With the Census of Manufactures and County Business Patterns at your right hand, you are a market expert. Latest County Business Patterns for 1956 will be out next month. To do it up brown, you also arm yourself with the excellent industrial market tools issued by SALES MANAGEMENT, *The Iron Age*, *Steel*, McGraw-Hill Publishing Co., *Mill & Factory's* industrial marketing map—to mention just a few sources.

Another very useful help if you sell to industry, particularly if you sell through distributors, is the every-other-year analysis made by the American Supply & Machinery Manufacturers Assocation. The latest covers 1956. It shows what percentage of each class of goods, handled by industrial distributors, is sold in each industrial trading area, each state, and region.

Incidentally, this survey shows how rapidly your market is moving away from the crowded cities. In 1940, industrial distributors in the first 100 cities accounted for 85% of the sales. By '56 the proportion had dropped to less than 75%.

That brings up a highly important point. The industrial market shifts in the past 10 or 15 years have been great. The Pacific Coast industrial market is about two-and-a-third times as big today as it was in '39. The West South Central area is more than twice as big.

But it isn't unusual to find industrial marketers with a sales organization tailored to fit the pre-war market bumps and curves. This may mean uncomfortable tightness in the chest, and over-bulginess in the seat of the pants.

If your business-getting pattern doesn't fit today's market the result, of course, is lost sales.

Once New England was your major industrial market. Then the Middle Atlantic states. Now the East North Central region is top dog.

Industrial marketers who judge how much business they should get from a given territory merely by how much they got in the past—and that is exactly how many of them figure—are likely to be outdistanced by those who take the trouble to find out just where the business is, and tailor their sales pattern accordingly.

When you put on paper how much you can reasonably expect from each part of your market, you put a finger squarely on any weak spots in your sales set-up.

You may have your own favorite market yardstick, but employment is a pretty handy one. Armed with employment figures, you can work out a fairly reasonable sales percentage for an area, provided you have an idea of what the sales of your kind of product are per 100 employes for each industry.

The Men Who Analyze Your Markets

Ad Chief, Student, Teacher

Richard C. Christian, Chicago, is executive v-p, Marsteller, Rickard, Gebhardt and Reed, Inc. He got his B.S. in Business Administration from Miami University, Oxford, Ohio, in 1948, his Master's from Northwestern the following year. But he's a bug for education, has also studied at Charleston's The Citadel, Denison University and the Biarritz American University in France. During his business career he has been senior market analyst for National Cash Register Co. and for Rockwell Manufacturing Co. He's co-founder and co-chairman, Industrial Marketing Group, Chicago, of American Marketing Association. Author of theses on "Statistical Sampling" and "Analysis of Sales Quotas."

Old Hand At Figures

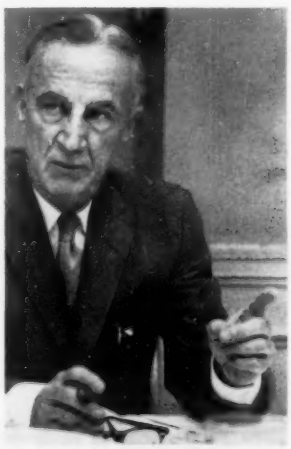
Hugh Britton, director of Census, McGraw-Hill Publishing Co., Inc., New York, is an old hand at figures. He's been with his company since 1931 but looks too young to have watched 27 career years roll past. (Actually Britton's full title is "Director of Census of Manufacturing," and you needn't expect him to ring your bell and ask how many are in the family.) His department mails, in a typical year, some 200,000 questionnaires. His Census is the largest survey of American industry conducted by a private firm. It is patterned after classifications established by the Federal government in its Standard Industrial Classifications. Britton lives at Stony Point, N.Y.

Readers' Answer Man

Arthur H. Dix, New York, is vice-president in charge of research of Conover-Mast Publications, Inc., publisher of "Mill & Factory," "Purchasing," "Construction Equipment" and other business magazines and directories. Two of its tools: "Mill & Factory's Industrial Marketing Map" and "Industrial Marketing Analysis." Before he joined C-M in 1945 he was manager of reader service for "The Iron Age." He served, for several years, as a member of the Industrial Advertising Research Institute's Technical Advisory Committee. Presently he is a member of the Research Committee, National Industrial Distributors Association.

Market Evaluator

Dr. Jay M. Gould, New York, is a pulse-feeler. As director of research, SALES MANAGEMENT'S "Survey of Industrial Buying Power" and "Survey of Buying Power", he directs the most widely-used non-governmental data sources on marketing. To give you an idea of the scope: More than $200 billion in sales quotas are annually based on the "Survey of Buying Power." Dr. Gould also is managing director of Market Statistics, Inc., which performs marketing evaluations for private business. He received his Ph.D. from Columbia in '46, is the author of numerous works on marketing and economics, has served on the staffs of Rutgers University and other institutions as well as publications.



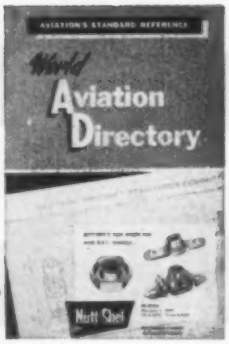
Metals in His Blood

Oliver Johnson is director of research, "The Iron Age," Philadelphia. Has been for years. His publication is a horizontal one within the metalworking and metalproducing industries. Among the research tools offered by his company, Chilton Co., Inc., are the "Master List of Metalworking Plants in Metalworking" and "Basic Marketing Data on Metalworking." The first lists nearly 27,000 metalworking plants. The second is a statistical summary of plant employment.

The Researching Promoter

Sal F. Marino, Cleveland, is promotion director of "Steel" Magazine. He joined Penton Publishing Co., which publishes "Steel", as research and promotion manager for the publication in 1952. Two years later he moved into his present job. In '56 he added research and promotion activities of "Automation" Magazine to his duties. And last year he was given supervision responsibilities over all of Penton's corporate promotion. His company's well known industrial marketing tool: "Metalworking Markets." Before he joined Penton he had been research and promotion manager for The National Petroleum Publishing Co. and for Huebner Publications.

. . . . ARMED



FORCES MANAGEMENT SERVES . . . . . TOP . . . . . HE MISSILE MARKET. . . . . . ALL EDITIONS . . . . . .

MISSILES AND

ROCKETS SERVES OVER 23,800

AMERICAN AVIATION SERVES . . . . . .

AIR CARGO SERVES THE FAST GROWING. . . . . .

. . . . . ALL EDITIONS OF THE

American Aviation Publications ***Offers You The World's Most . . .***

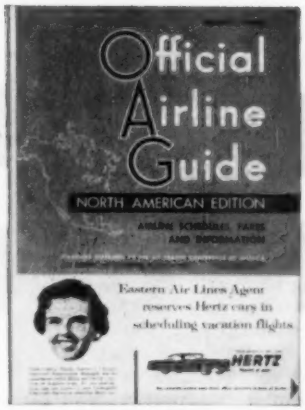
COMPREHENSIVE COVERAGE

With 14 publications, American Aviation Publications covers every facet . . . every market of the aviation industry. From commercial aviation to manufacturing of aircraft to the new multi-billion dollar missile market, there's an American Aviation Publication to serve you.

AMERICAN AVIATION magazine, founded in 1937, is the aviation magazine edited for and serving the manufacturers and operators of piloted aircraft. Today AMERICAN AVIATION is the only aviation magazine with an integrated editorial coverage for an integrated aviation market.

As the industry has grown and expanded, so has AMERICAN AVIATION PUBLICATIONS.

When in 1956 the new and fast growing missile market needed its own publication, MISSILES AND ROCKETS was born of this need. Devoted solely to the market that produces space vehicles that are launched from ground or air,



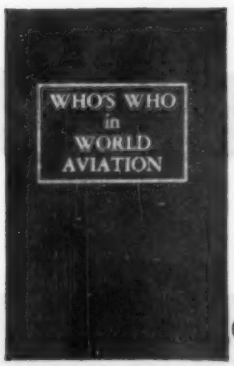
EXECUTIVES IN THE MILITARY MARKET . . .

. . SUBSCRIBERS IN THE MISSILE MARKET . .

. MANUFACTURERS AND OPERATORS OF PILOTED . AIRCRAFT . . AND .

. SERVES TOP EXECUTIVES

IN THE MILITARY MARKET



. SHIPPING MARKET . . .

. . OFFICIAL AIRLINE GUIDE SERVE AS WORKBOOKS FOR THE SCHEDULED AIRL

OF THE AVIATION INDUSTRY

MISSILES AND ROCKETS was first published as a monthly. To provide full editorial coverage for this dynamic new market, MISSILES AND ROCKETS will be published weekly, starting July 7, 1958.

Other American Aviation Publications pinpoint segments of the industry that enable you to go direct to the core of these markets. For further information about the publication that can serve you best, contact American Aviation Publications, Inc.

AMERICAN AVIATION PUBLICATIONS, INC.

World's Largest Aviation Publishers

1001 VERMONT AVENUE, N.W. • WASHINGTON 5, D. C.

Sometimes information like that is available from business publications . . . or other sources. For instance, a survey made by Conover-Mast Publications, Inc., based on cutting tool purchases per 100 employes for each S. I. C. group, reveals that purchases range from a high of $4,300 per 100 employes per year in the transportation equipment industry down to $51 in apparel.

A similar survey covering portable electric tools shows that the machinery industry has the highest annual purchases per 100 employes, with an average of $209, to $13 in apparel.

Business magazines can supply you with market data on everything from two-way radios to industrial fencing.

Where are the prospects?

State and other industrial directories contain names of the plants, executives, number of employes, etc.

At least one mailing list house has lists of every manufacturer in Dun & Bradstreet coded down to four S.I.C. digits, you can get any kind of names you want. This is the Creative Mailing Service, 460 North Main St., Freeport, N. Y.

With the useful tools at your disposal, it isn't too difficult to figure out the importance of each part of your market. It is easiest, of course, in the case of expendable products like cutting tools, lubricants, abrasives, etc. But even for O.E.M. and capital goods it pays to put on paper where the business is most likely to come from.

Not much effort is involved. There are no experts in this business. The simpler your analysis is—the better. That's the No. 1 rule. Keep it simple. If it is in any way complicated, the people who run the business and who do the selling frequently won't understand it, and what they don't understand they distrust. And you don't have to try for decimal point exactness. It isn't in the cards anyway. Most successful quota systems have a liberal degree of flexibility. Twenty-five per cent plus or minus is par for the course.

OLIVER JOHNSON, Director of Research, The Iron Age, reports:

How to Organize Research

- **To locate prime prospects, marginal prospects, non-users**
- **To determine numbers of prospects**

A method of finding industrial prospects for an established product—a method that has demonstrated its effectiveness—is the research method. This is simply another way of saying it is an *organized* approach to the problem.

Let's see how you get organized to do this job, and I will take the metalworking industry as an example of the market where you could go prospect hunting. This is not a homogeneous market, which means that all types of plants within this diversified market cannot use product X to the same degree. Thus there are prime prospects, marginal prospects and non-users of product X all contained within the boundaries of any sales territory.

The first step is to classify your present customers, and you can beneficially use the S.I.C. codes for this purpose. In this operation you are identifying and defining your market in terms of S.I.C. plant groups. By recording your sales in these S.I.C. customer groups you are in a position to evaluate the worth of these groups by comparing one group with another as to what the groups mean to your company saleswise. You will soon recognize which S.I.C. groups are prime customers, marginal customers, and average customers.

The second step is to find out *how many* industrial plants there are, similar to the kind you have been selling to—*where* they are located, and *how big* they are. This can readily be determined by referring to a book like *The Iron Age's* Basic Marketing Data for Metalworking. It is an original census which answers the questions of *how many*, *where* and *how big* on a national basis, on a state basis, and on a sales territorial basis.

As you have identified your market by S.I.C. you can now pursue those S.I.C. codes in the Data Book to see where your sales opportunities are located. Up to this point, however, you have located the prospects statistically, but you haven't actually located the individual plants.

Here another research tool is needed. It is the Master List of Metalworking Plants. It contains the names of over 26,600 metalworking plants employing 20 or more production workers. The same plants that were portrayed statistically in the Basic Data Book. Arranged by states and alphabetically by company name within the states, the listings show plant location, 4-digit S.I.C. code, a code for size of plant, and a code for the industrial area in which the plants are located.

In any sales territory you can easily identify the statistics gleaned from Basic Data *in terms of names of plants* that are within your market. By comparing with your customer list you will undoubtedly find some names that are not now on your own customer or prospect list. You can also use this master list for coding your customers in the metalworking field.

Another way to put the S.I.C. codes to work at locating prospects is to send out a research questionnaire asking for market information pertinent to your sales operation. This can be sent either to the plants in the S.I.C. groups that are in your market, or you could compile a list of S.I.C. numbers of plant groups that you suspect might be in your market.

We can sort out the punch cards from our Master File of metalworking plants matching your S.I.C. selections. The results usually are as follows, and I quote from one of many similar recent letters I have received on the subject of results.

By-Product of Survey

"The basic objective of our mail survey was to determine the size of the market for our power transmission item. We feel that the survey gave us sufficient information to make a fairly good estimate of the size of this market.

"The survey had an important by-product, which in the long run may prove to be of more value than the original objective. In checking the returns we found that we had uncovered a number of important new prospects which apparently had completely escaped the attention of our sales department previously.

"In addition, we found that some of the accounts which we had on our prospect list were actually much larger than we had thought—pointing to opportunities for greater sales effort in that direction."

Want your advertising to work harder?

more inquiries
more buyers per dollar
among industry's
most active
buying group!

Total Distribution as of December, 1957

SIC Group	Industries	N.E.D. Copies	Total Plants Reached	Plants Rated Over $200,000
33	Primary Metal Industries	6,352	3,092	2,023
34	Fabricated Metal Products	10,681	7,388	3,901
35	Machinery (except Electrical)	13,857	7,855	4,338
36	Electrical Machinery	7,608	3,044	1,997
37	Transportation Equipment	5,338	1,971	1,446
38	Professional Scient. Instru., etc.	2,262	1,059	688
19	Ordnance	371	119	105
	Metalworking Total	46,469	24,528	14,498
20	Food & Kindred Products	2,849	2,010	1,863
21	Tobacco Manufacturers	134	81	81
22	Textile Mill Products	2,817	1,850	1,688
23	Apparel	519	442	399
24	Lumber & Wood Products (except Furniture	1,469	1,324	914
25	Furniture and Fixtures	1,476	1,158	713
26	Paper & Allied Products	2,388	1,383	1,157
27	Printing & Publishing	563	453	382
28	Chemicals & Allied Products	5,349	3,167	2,639
29	Products of Petroleum & Coal	903	489	454
30	Rubber Products	1,060	473	359
31	Leather Products	863	766	569
32	Stone, Clay & Glass Products	2,923	1,853	1,372
39	Miscellaneous Industries	1,963	1,391	771
	Manufacturing Total	72,746	41,368	27,859
41-48	Transportation	797	510	506
10-14	Mining	1,225	1,084	747
49	Utilities & Sanitary Services	1,059	644	633
15-17	Contract Construction	166	125	107
51	Wholesale Trade (other than Merchant)	41	41	37
	Government	56	55	
	Total Controlled Distribution	75,089	43,827	29,889
	Advertisers, Agencies & Prospects	6,037		
	Grand Total	81,127	43,827	29,889

Deliberately designed for only one purpose

If you want your advertising to work harder . . . if you want more inquiries, more business among industry's most active buying group . . . then you belong in N.E.D. For N.E.D. was deliberately designed for only one purpose: to help industry's most active buying group do their jobs better, easier, faster. Every month 80,000-plus industry buying influences (not counting pass-along readers) in over 43,800 of the country's most worthwhile plants shop their way through N.E.D. They're searching for products, looking for more information, planning to buy.

N.E.D. takes your advertising to all worthwhile markets . . . concentrates it in those markets with the best business potentials. With our broad coverage we help you search out the prospect who is ready to buy *now!*

balanced low-cost coverage of buying influences

JOB FUNCTION	FUNCTIONS OF READERS %	Primary	%	Secondary	Total primary and secondary
Production	20.6	15,456	25.4	28,395	43,851
Plant Operation & Maintenance	28.8	21,608	24.2	27,054	48,662
Engineering and Design	32.8	24,609	21.0	23,476	48,085
Purchasing	17.8	13,355	29.4	32,867	46,222
TOTALS	100%	75,028	100%	111,792	*186,820

*2.49 job functions per reader

Results you can measure

98 out of every 100 readers inquire about the products or services in N.E.D. . . . N.E.D.-produced inquiries, when followed up by salesmen, produce a great many more sales than cold calls . . . more than one out of every three readers say N.E.D. is their "primary source" of product news. Buying action now being created by N.E.D. tops all previous records.

All recipients of N.E.D. are major key men with specifying and buying power in their companies. N.E.D. readers average 2.49 job functions as shown in the table below. N.E.D. coverage is 100% Verified Controlled Circulation, 99.57% of all copies are addressed to individuals by name and title, and over 90% is request circulation.

Get our Data File, "How to Get Industrial Buying ACTION for ¼¢ per copy." Write to N.E.D. today!

A PENTON PUBLICATION • Penton Building
Clevelend 13, Ohio • F. O. Rice, Publisher

NEW EQUIPMENT DIGEST

NDP

BPA

S. F. MARINO, Promotion Director, "Steel" magazine, urges:

Check Your Ad Men on These Points!

YOU CAN CREATE MORE EFFECTIVE INDUSTRIAL ADS

(just as you now locate industrial markets easier)

BY USING STANDARD INDUSTRIAL CLASSIFICATION DATA

What's wrong with industrial advertising copy today? In my most critical mood I would say:

Too much imitation . . . not enough innovation.

Too much glitter . . . not enough glow.

Too much show . . . not enough know.

Too much tell . . . not enough sell.

Too little copy . . . too much copy-cat.

I admit that this is a pretty damaging assortment of negatives to hurl at the industrial advertiser — with or without cause.

But now let me suggest a more positive approach to the problem of creating more effective industrial advertising. Here is an idea or two which will suggest a course of positive action.

How to Write More Specific Copy. We need more specific industrial advertising copy. Here are five "knows" and a "perhaps" that may help you answer this need most effectively.

1. Know your publication audience . . . its mix, its needs, its buying habits, its problems, its desires, etc.
2. Know, as nearly as you can, how many of your customers and top-grade prospects are part of this audience.
3. Know the common denominator interest of your customers and prospects.
4. Know what motivates your customers to buy your product.
5. Know what motivates your prospects to buy your competitors' products or not buy at all.

If you have these five "knows," you are well on the road to writing more readable, more specific industrial ad copy. If you do not have them, then "perhaps" S. I. C. (Standard Industrial Classification) can help you get them.

What is S. I. C? Standard Industrial Classification, very simply, is a standard method of classifying business establishments by major product produced, or by major service performed.

This system has been adopted by the Federal government and by many states for the collection, classification and presentation of statistical information relating to business establishments.

Except to say that much of the marketing and media data issued by business paper publishers today are also compiled and presented on an S. I. C. basis, I will not dwell on the detail of S. I. C. Let me get more immediately to this basic point:

S. I. C. is a classification system. It permits us to group establishments, markets, people, etc., into homogeneous groups. Herein lies its greatest value to the writer of industrial advertising copy.

Better Mousetrap Theory Passe. "Nobody ever beat a path to any door for any mousetrap—no matter how good it was."

These are the words of Clay H. Hollister, chairman of Case Institute of Technology's Department of Engineering Administration. He thinks too many businessmen, and industrial copywriters, are misled by the mousetrap doctrine. They are neglecting the power of simple, understandable, and continuous communication as a moving force in sales.

Experts agree that to change a prospect into a customer you must: (1) Know what he wants. (2) Tell him you have it for him.

Even if you build a better mousetrap, how do you know people really want it? Maybe they don't have mice. Perhaps they prefer another type of extermination.

How S. I. C. Can Help You Determine Customer Wants. How can you communicate with your customers and prospects more understandably? First, locate your prospects by determining which S. I. C. classifications represent potential markets for you. Once you have done this, build an accurate list of prospects by company, address and individual's name and title. All lists should be coded by S. I. C.

Second, a program of explorations should be planned to determine buying influence, needs, wants, desires, and motivations. These should be S. I. C. oriented so that the likes and differences of your homogeneous markets can be recorded. Five ready sources are available to help you do this:

(a) Your own personnel: Employe suggestion systems may turn up unexpected material on customer requirements. Your salesmen are obviously in a prime spot to keep you informed. But check their reports. They are optimists by nature. They may view prospects through rose-colored glasses.

Some companies give their salesmen brief training in effective marketing research techniques. Many also employ outside research specialists or have captive research departments.

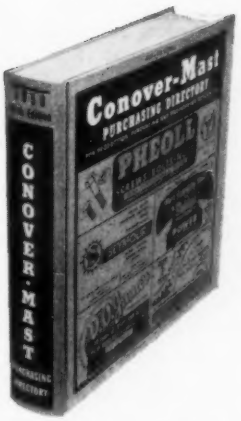
All sales records should be S. I. C. coded.

(b) Through your competitors. Check their products, advertising and catalogs. All competitive records should be S. I. C. coded for easy comparison.

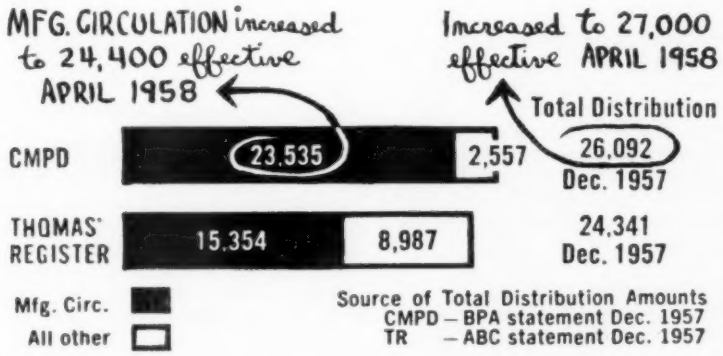
(c) Through trade associations and shows. Attend those in your own territory and in your customer's fields.

You Get the Greatest Coverage of the Industrial Market through

Conover-Mast PURCHASING DIRECTORY



Through CONOVER-MAST PURCHASING DIRECTORY you reach practically every worthwhile plant in industry. You get maximum industrial coverage.



You contact not only industrial purchasing executives, but plant and engineering executives as well. You tap all industrial buying influences.

Industrial Executives Reached Through CMPD

Plant and Engineering Executives	51%
Purchasing Executives	46%
All Other	3%
	100%

Circulation, listings and advertising—all are wholly industrial. Preferred by a great and growing army of industrial executives who control and influence buying—because its compact completeness enables them to locate reliable supply sources in half the time.

Number of plants reached by CMPD in each industry

INDUSTRY	Plants Covered by CMPD
Machinery, Except Electrical	6,002
Electrical Machinery, etc.	2,394
Fabricated Metal Prods.	5,523
Transportation Equip.	1,286
Instruments & Related Prods.	674
Primary Metals	1,453
Chemicals & Allied Prods.	1,362
Rubber Products	275
Petroleum & Coal Prods.	306
Stone, Clay & Glass	407
Leather & Leather Prods.	322
Lumber & Products	228
Furniture & Fixtures	149
Paper & Allied Prods.	376
Textile Mill Prods.	543
Food & Kindred Prods.	342
Tobacco Mfrs.	28
Apparel & Related Prods.	39
Printing & Publishing Ind.	108
Ordnance & Accessories	181
Miscellaneous Mfg.	296
Total Manufacturing Plants	**22,294**

Manufacturing Plant Circulation (22,294 Plants)	23,535 copies
Public Utilities	423 copies
Mines, Quarries, Oil Wells	281 copies
Engineering & Construction	319 copies
Government Procurement Offices: Army, Navy, Air Force, etc.	421 copies
State, County, Municipal	254 copies
Industrial Distributors	375 copies
All Other	49 copies
	25,657 copies
Advertising Agencies, etc.	435 copies
Total Distribution—Dec. 1957	26,092 copies

Call your nearest Conover-Mast Representative, or write direct

Chicago—737 North Michigan Ave.	Whitehall 4-6612
Cleveland—1900 Euclid Ave.	Cherry 1-7788
Los Angeles—864 South Robertson Blvd.	Oleander 5-9580
Philadelphia—3120 Fordham Road	Orchard 3-8172
Philadelphia—510 Gainsboro Road, Drexel Hill, Pa.	Clearbrook 9-2595
Massachusetts—Water Street, Foxboro, Mass.	Kingswood 3-2051
Detroit—15817 James Couzens Highway	Diamond 1-8911
Cincinnati—84 Burdsall Ave., So. Fort Mitchell, Ky.	Edison 1-2102
New Jersey—Box 389, Normandy Beach, N. J.	Orange 4-6001
Connecticut—34 Prospect Street, Essex, Conn.	South 7-8350
Southern States—Box 643, Anderson, S. C.	

Conover-Mast PURCHASING DIRECTORY

205 East 42nd Street, New York 17, N.Y.

Associate Publications:

AVIATION AGE • BUSINESS/COMMERCIAL AVIATION • PURCHASING
MILL & FACTORY • VOLUME FEEDING MANAGEMENT
CONSTRUCTION EQUIPMENT

Check showgoers for their interests, needs, and reasons for attending shows.

(d) Through government publications. Check the catalogs, booklets and indexes of the Commerce, Agriculture and Defense departments, the Small Business Administration, the U. S. Patent Office and the research and development groups.

(e) Through business publications. Some 2,400 in the nation live on communicating ideas to their readers who, incidentally, happen to be your best customers and prospects.

Ask these publication editors to interpret the reader for you. Ask their research and circulation departments to help you locate these men, determine how many there are, tell you about their buying habits, etc. Many of these publications are now classifying all circulation and market data according to S. I. C.

Speak Your Customer's Language. While much of the foregoing has dealt with learning to know your customer, we are now faced with the problem of how to communicate with him. True communication includes five steps:

1. Clarify the idea or problem.
2. Get participation.
3. Transmit ideas or decisions.
4. Motivate the customer to act.
5. Measure the effect.

S. I. C. can help you accomplish all five of these steps more quickly and effectively because it permits you to talk to your customers on points of common denominator interest.

Clarifying the Idea. The beginning of all communication is a thought or idea. There is no use in opening the tap if there is no water in the tank. The idea should be in tune with your customers' interests. S. I. C. puts you in tune more quickly and accurately. It permits you to state your selling points with more assurance of a careful and precise understanding and identification by your reader.

Getting Participation. Draw your readers into the story by identifying them with your product or service. S. I. C. makes this easier for you.

Through the knowledge and insight you have gained from grouping and studying your prospects, you can now attract them by talking a language which is mutually understandable.

Transmitting the Idea. You must plan carefully what it is you want to communicate, to whom to communicate and how best to do it. You will want to consider the nature of the group, *the medium for reaching them,* the selection of words, pictures and expressions to connote the exact meaning and to stimulate the proper action.

Motivating Your Customers. Understanding your message is not enough. You want your advertisements to be accepted and acted upon. If your copy states what you have to sell in terms of what the customer wants to buy, if it is understandable and meaningful, if it is timely, your chances for motivating him to take action are excellent.

Measuring Effectiveness. It is not enough to talk. You must also listen to find out how good your communications are.

Many devices are available to the industrial advertiser who wants to measure advertising effectiveness: Readership checks such as Starch, Reader Feedback, Readex, Ad-Gage, Shepard, etc.; impact and target interviews; inquiries; salesmen's reports; attitude and acceptance surveys; recognition studies; depth interviewing; and most important of all, greater effectiveness by your selling team.

S. I. C. makes it easier to measure results in the same way that it makes it easier for you to talk to your customers and prospects. It teaches you to know them better. It helps you to talk to them and to have them talk to you in more understandable terms.

Avoid the Mousetrap. You will have to have more than a good product to be successful. You will have to learn what your customer wants, make it for him and then tell him you have it —*but tell him in language he understands in a medium that reaches him.* S. I. C. can help do both more effectively.

Dr. JAY M. GOULD, Director of Research,
Sales Management's "Survey of Industrial Buying Power," observes:

Good Salesmen Need Better Research

You probably will always have some disagreement on the part of people who do not want to disturb sleeping dogs. It is human for a salesman, for example, to assume that he knows best how to locate industrial prospects through his own field work. You can not blame him if he thinks his way is superior to anything the home office, which is not out on the firing line, can dream up.

But as our industrial economy becomes more complex, the salesman's traditional reliance on brute force certainly must give way to a thoughtful combing by the central office of all sources of prospects.

SALES MANAGEMENT presents—commencing on page 83 the most precise measures for pinpointing specific industrial markets ever published. We show 4-digit S.I.C. data for the nation and for counties for each of nearly 450 separate industries. One need not be an experienced researcher to know what a boon this means to industrial marketers. The 4-digit S.I.C. classification is so specific that, as in the case of S.I.C. 2264 "Hatters Fur," for example, you find that only two counties out of the 3,074 counties in the nation account for 26 out of the plants to be found in this industry.

SM estimates of 1957 employment and gross sales for S.I.C. industries start on page 83. The employment estimates for 2- and 4-digit industries were prepared by SM's research staff, Market Statistics, under the direction of Dr. Gould. Estimates of gross sales for 4-digit industries were prepared by economic consultant Peter B. B. Andrews, whose reputation for successfully measuring economic movements has long been recognized by private industry and government. Mr. Andrews heads the Board of Analysts of SM's Future Sales Ratings.

"Now we know the incomparable selling power of The New York Times"

That's the hard-headed judgment of Florida businessman Leon Garfield. It is based on tens of thousands of dollars worth of business he is racking up from one advertisement in The New York Times.

Mr. Garfield is director of the Castaways Resort-Motel, Miami Beach. It occupies ten acres of ocean-front, has 304 rooms, three swimming pools, a private marina and fishing pier.

A page advertisement for Castaways ran exclusively in The New York Times on Sunday, Jan. 19.

"Within 30 days this advertisement in The Times produced 1,671 coupon returns and 164 phone calls," says Mr. Garfield. "They came from 35 states, Washington, D.C., Canada, Hawaii, Sweden.

"Within that same period we received 82 definite reservations accompanied by cash deposits. Since the minimum expenditure is approximately $200, we can depend on $16,400 business from these first reservations alone.

"Now we know the incomparable selling power of The New York Times."

Can you use this "incomparable selling power" in your own business? Then get the facts now about The New York Times. Find out why smart, experienced, successful advertisers have made it the leading advertising medium in the world's first market for 39 years.

Jack be Nimble . . . . . Be

It is a time for thinking . . .

It is a time for salesmen—real salesmen who know what salesmanship means . . .

It is a time for leadership—dynamic leadership . . .

It is a time for opportunities—opportunities for those who will look for them and take calculated action to turn them into profits . . .

It is a time for boldness—for bold, broad strokes which spell out your company's unique advantages in terms of useful products, services and ideas . . .

It is a time for *concentration* on your most productive markets—major distributing and prospective customer areas . . .

Jack be nimble,
Jack be quick
With any Journal edition you pick.
Choose one or more
Or use all four
To open up your prospect's door.

Published at:

NEW YORK and WASHINGTON, D. C.
44 Broad St. 1015 - 14th St., N.W.

CHICAGO
711 W. Monroe St.

And . . . now is the time to use The Wall Street Journal because it delivers primary markets of top management influence and buying decisions . . . regionally or nationally . . . at a cost you *can* afford.

If you want dominance, regional flexibility, daily control, plus real impact, The Wall Street Journal fits perfectly into your 1958 advertising picture.

It is time now—*right now*—to get all the advertising facts about the National Business Daily.

NEW PRESENTATION!

If you and your key men would like to hear a complete story of Wall Street Journal benefits to advertisers, contact any office listed today. Fifteen minutes is all it takes, but what a difference these facts can mean to your 1958 profit picture!

Quick...*with* THE WALL STREET JOURNAL

"It brings you business!"

DALLAS
911 Young St.

SAN FRANCISCO
1540 Market St.

The Industrial Survey—

Who's Using it and How

To find out who is using the industrial survey and how, SALES MANAGEMENT surveyed more than 1,000 subscribers and members of the National Industrial Advertisers Association. Several hundred replies indicate that the "Survey" has already become an important cog in the marketing wheels of companies in virtually every S.I.C. category.

The uses of the *Survey of Industrial Buying Power* seem infinite!

A recent spot check of the Cleveland Field Office of the U.S. Department of Commerce gives a good indication of the broad range of users who have dog-eared the library's two volumes. According to Zelda W. Milner, chief of the Cleveland Research Division, the *Survey of Industrial Buying Power* is sought out for answers to diverse problems in every area of business: A farm machinery producer wants to realign sales territories; a distributor of lubricants seeks to reduce marketing costs; a trade association wants statistics for a market study of its position compared with competing industries; another association wants to determine the potential attendance at a trade fair proposed for a new geographic area; a chemical producer is evaluating several new plant locations. . .

From hundreds of case histories, seven major applications were derived:

1. Determining sales potential.
2. Setting sales quotas.
3. Realigning sales territories.
4. Determining types and territories of distributors.
5. Allocating and distributing advertising and sales promotion budgets.
6. Determining advertising media.
7. Investigating new plant, branch and warehouse locations.

A follow-up analysis of some of the more advanced users of the *Survey* shows that most of these applications were based on the first—determining sales potential. Sales quotas, for example, are derived from a combination of sales potential, and an index of past performance.

Comparing sales potential with past sales performance led to realignment of sales territories in many cases. In others it indicated a greater need for advertising and sales promotion. In certain instances, a study of the difference between sales potential and sales performance uncovered new markets, initiated new sales branches or distributor franchises.

L. T. Montant, Jr., manager of sales analysis and market research for the Insulation Division of the Eagle-Picher Co., puts it another way:

"About the first question alert top management and sales management asks about a product is, 'What's the potential market?' A close second question is 'Where's our market?' "

Some years ago, Eagle-Picher brought out a new product: Floor-Dry No. 85. It's a mineral-type absorbent for oil and water used in large quantities by manufacturers of metal products.

Then recently management began asking questions: "Where are our sales strong, where are they weak? Do we have distribution where we should? What sort of jobs are our present distributors doing? Do our sales territories make sense?"

"To answer any of these questions, as any seasoned marketing manager knows, takes a little digging," says Montant. "To answer them you need a market index. That's where the *Survey of Industrial Buying Power* comes in.

"Reports from our area managers, and sales reports from our distributors both indicated that the major market for a product of this type was the metal-working group of manufacturing industries. To be sure, we knew that other industries used a product of this type. But, at least at the outset, we were after what you might call our 'key consumers.' We also found out from the men on the firing line—the field sales people—that certain industries used more of our product than others.

"The next step was to relate the use of our product, by industry, to some index of industry size. Naturally, other things being equal, if one plant in an industry has twice as many workers as another, you can assume it's twice as big a customer for whatever you sell.

"Here's what we found out:

"1. When we compared what we thought were big markets (on the basis of our index) with actual sales in those markets some showed up very well; others, to put it mildly, did not. We started asking questions. Weaknesses and strengths of competition showed up. So did industry preference and prejudices. And, once in a while, we found misdirected sales effort.

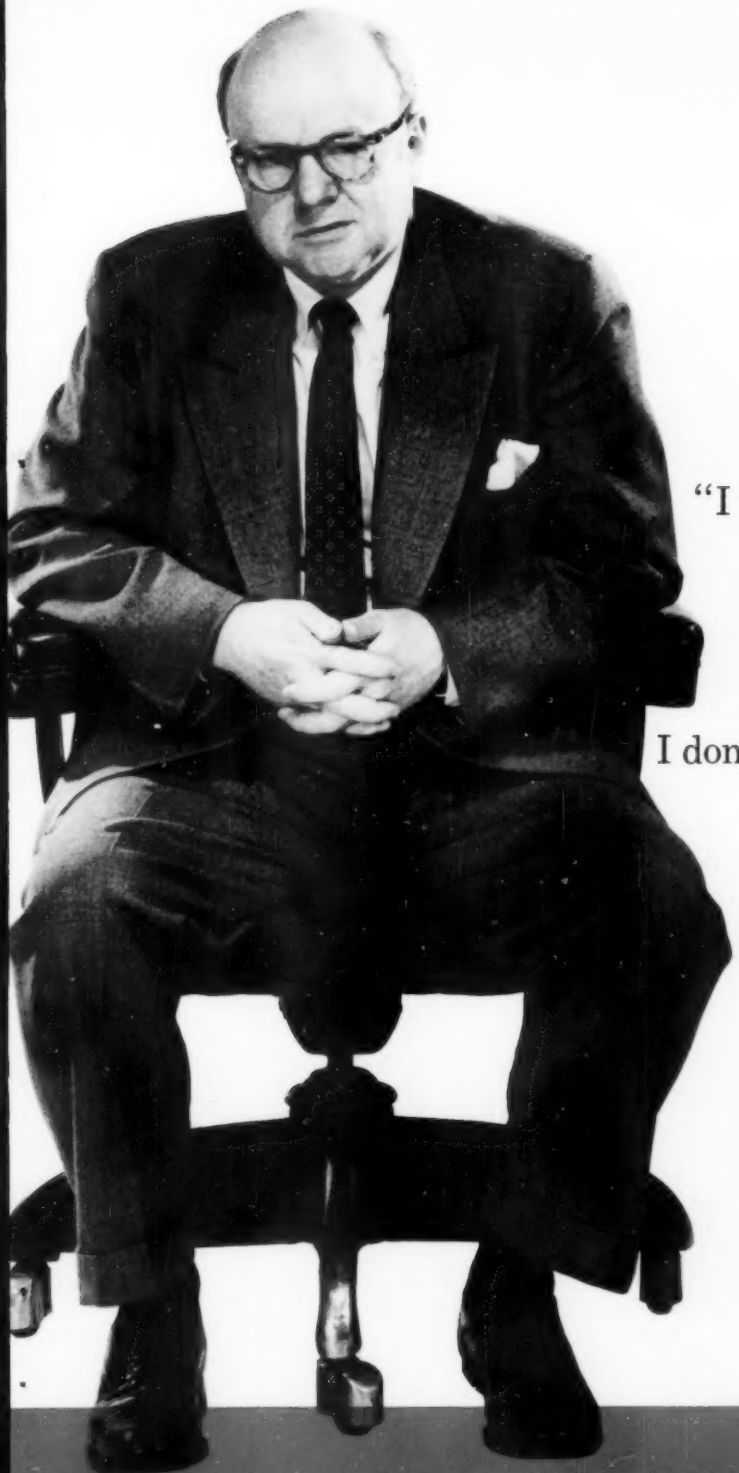
"2. We found areas where we didn't have distribution. A market index value for the area compared with other areas where we had distribution gave us added selling tools for setting up new outlets. We didn't have to talk 'blue sky' to prospects; we showed them how much business, how much profit our line could bring them."

John J. Schadek, director of the Market Research & Product Planning Department of Kimberly-Clark's Industrial and Specialty Products Division, also relies on the *Survey of Industrial Buying Power* to answer some tough questions in a highly competitive industry.

Historically, Kimberly-Clark's Kimpac Interior Packaging is a relatively specialized type of material whose sales have been concentrated in a limited number of manufacturing industries. Although a general knowledge of this sales pattern had existed for many years, it was not until recently that a system of end-use analysis was established to align sales potential, quotas and territories.

The new system incorporates S.I.C. codes with return postcards requesting certain basic information from Kimpac purchasers. Three basic items of information are requested: (1) a brief description of Kimpac application; (2) the type of business the customer is in—manufacturer, converter, wholesaler, retailer, etc., (3) the principal product manufactured or distributed.

Depending on the item packaged or the principal product manufac-



"I don't know who you are.

I don't know your company.

I don't know your company's product.

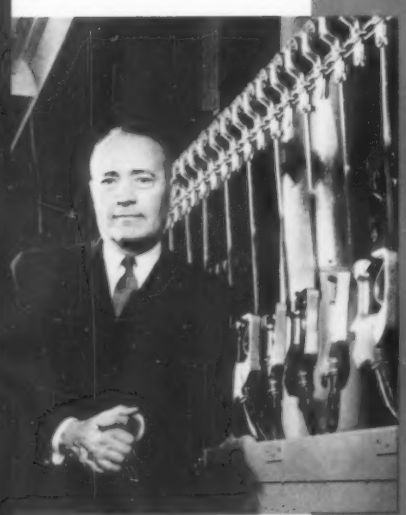
Now—what was it you

wanted to sell me?"

MORAL: Sales start before your salesman calls—
with business magazine advertising. Here's how...

"We make 50,000
extra calls a day
through advertising"

J. E. M. Wilson, Vice President, Sales,
The Jeffrey Manufacturing Company



"We counteract
market changes
with advertising in
business magazines"

Gilbert B. Richards, President,
OPW Corporation and its subsidiary,
Jordan Corporation

"We use business magazines to pinpoint industrial prospects"

Garlan Morse, General Sales Manager,
Lighting Division,
Sylvania Electric Products, Inc.

"Advertising closes the gap between product development and sales"

Nelson Havill, General Sales Manager of Potter and Brumfield, subsidiary of American Machine & Foundry Company

"Advertising accomplishes the first steps to sales . . . lets salesmen serve customers' needs"

Lewis A. Curtis, President,
Package Machinery Company

"Advertising helps us uncover new markets"

John D. Benedito, Sales Vice President,
Bakelite Company,
Division of Union Carbide Corp.

"Advertising in business publications helped us increase recognition by 70%"

R. H. Wagner, General Manager (Regional Operations), Elevator Division, Westinghouse Electric Corporation

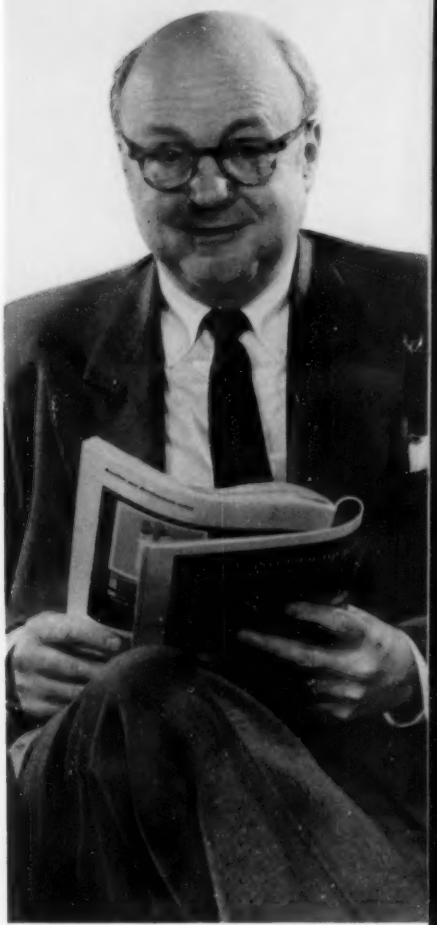
"Business publication advertising gave us growth capital as well as product sales"

David Packard, President, and William Hewlett, Vice President, Hewlett-Packard Corp.

Make Contact

Arouse Interest

Create Preference



More advertising here means

If what you make or sell is bought by business and industry, you can "MECHANIZE" your selling by *concentrating* your advertising in the one or more McGraw-Hill publications serving your markets.

Make a Proposal

Close the Order

Keep Customers Sold

■ *more sales time here*

"MECHANIZED SELLING" will help to make key men of business and industry aware of your company's name . . . create preference for your products and services . . . enhance your corporate reputation . . . give your salesmen more time to make specific proposals and close sales.

McGraw-Hill Publications serve
American Industry with

34

business magazines

McGRAW-HILL PUBLICATIONS
McGraw-Hill Publishing Company, Incorporated
330 West 42nd Street
New York 36, N. Y.

NAME-THE-PLANT QUIZ

Each line below relates to a large company in a specific 4-digit industry. The clues are contained in the name of the county dominated by the plant and the SM employment figure. The latter is the more significant, since with the county designation it all but names the plant. This quiz emphasizes the unique importance of SM's up-to-date employment estimates for 4-digit industries—which provide directive information that the Census Bureau frequently cannot disclose.

S.I.C. Code	The Industry	The County	Employment (thousands)	Fill in Company Name*
2037	Frozen Fruits & Vegetables	Cumberland, N. J.	1.4	
2072	Chocolate & Confectionery	Dauphin, Pa.	3.5	
2073	Chewing Gum	Queens, N. Y.	1.2	
2111	Cigarettes	Forsyth, N. C.	7.1	
2274	Hard Surface Floor Coverings	Lancaster, Pa.	4.5	
2322	Men's & Boys' Underwear	Warren, Ky.	1.0	
2532	Professional Furniture	Manitowoc, Wis.	1.1	
2613	Building Paper & Board Mills	Jefferson, La.	3.0	
2641	Paper Coating & Glazing	Ramsey, Minn.	5.2	
2792	Engraving & Plate Printing	Bronx, N. Y.	1.1	
2822	Intermediates & Organic Colors	Midland, Mich.	7.0	
2825	Synthetic Fibers	Sullivan, Tenn.	5.7	
3021	Rubber Footwear	Middlesex, Mass.	5.0	
3211	Flat Glass	Allegheny, Pa.	4.1	
3275	Mineral Wool	Licking, Ohio	3.0	
3352	Aluminum Rolling & Drawing	Blount, Tenn.	4.1	
3421	Cutlery	Suffolk, Mass.	2.3	
3424	Files	Providence, R. I.	1.0	
3521	Tractors	Tazewell, Ill.	17.9	
3669	Communications Equip., N.E.C.	Allegheny, Pa.	3.5	
3715	Truck Trailers	Lorain, Ohio	1.8	
3742	Railroad & Street Cars	Philadelphia, Pa.	5.1	
3871	Watches & Clocks	LaSalle, Ill.	4.0	
3931	Pianos	Hamilton, Ohio	1.4	
3951	Pens & Mechanical Pencils	Rock, Wis.	1.4	

*Check your answers with the correct names on page 184.

tured each reply card is coded with an S.I.C. number. The code numbers are then transferred to the customer's master IBM card, along with other pertinent sales information. The end-use cards are maintained in a permanent file, by industry, in the Market Research Department. Since inception of the program, the average rate of return has been 66%, according to Schadek.

"This end-use analysis enabled us to draw helpful conclusions about the nature of our business," says Schadek, "but the cards, alone, did not provide a dependable basis for estimating territorial potentials. The information on the cards was considered reliable for the major two-digit category industries. We were not certain that our codes were accurate on a four-digit basis or that all the user industries were covered. In addition to this difficulty, a significant part of our volume is sold through distributors, with the resultant loss of end-user identity."

To draw a bead on sales targets, Schadek's researchers conducted a major study designed to accurately define their industrial markets. Three thousand telephone calls, augmented by 350 personal interviews with cellulose wadding users, were made in four major markets selected on the basis of geographic location, diversity of industry, competitive activity, and their importance to Kimberly-Clark.

The results of this study, combined with end-use analysis, gave Schadek an accurate knowledge of the four-digit industries which represent "the real heart" of Kimberly - Clark's packaging potential. Of some 400-odd total four-digit industry groups, 112 were found to be important to the company.

"At this point we were required to make certain basic assumptions." says Schadek. "For example, we assumed that the areas studied were representative of the national situation. We also assumed that our distributors' sales followed the same pattern as our drop-shipped sales, to these assumptions we added certain projections based upon field surveys. We estimated the total current consumption of cellulose wadding, Kimberly-Clark's share of the total market, the degree of market saturation for cellulose wadding, and an estimate of the total national potential."

The next step involved the selection of a base for calculating individual territory potentials. Employment was chosen since it would provide a common denominator in any four-digit industry group and automatically compensate for variations in plant size. "Our problem was to determine the actual employment within the 112 four-digit industries that made up our total market," says Schadek. Also, the calculations up to this point had not yet taken into account the relationship *among* industries.

The answer to both these problems was found in the *Survey of Industrial Buying Power*. "Fortunately," says Schadek, "this volume provides a simple and economical way to accomplish this objective. Although we are forced, by the nature of some of our territories, to check many smaller counties, the SALES MANAGEMENT figures are sufficient in most cases, since they cover the counties which,

YOUR MARKETS ARE CHANGING!

Right NOW... behind the scenes, many changes are being planned in products and in manufacturing facilities...You can search out these NEW markets at a cost of only $165 a month!

The recession has stimulated technical progress. We are creating conditions for renewed growth. Greater efficiency, productivity and profitability are promised by within-the-plant generators of progress.

Up . . . Up . . . *Up* go expenditures for research and development . . . at the rate of a billion dollars a year! The $7.3 billion spent in 1957 is expected to reach $10 billion by 1961.

Of the companies reporting in McGraw-Hill's 11th Annual Survey of Capital Spending, 48% are chiefly interested in *new products;* 41% in *improved products;* 11% in *improved processes.* It is estimated that 12% of 1961 sales will be of products not now produced. (Business Week, April 19.)

No one knows all of the new products being developed, or in what plants they are being hatched. But one thing you can count on: *wherever product or process improvements are being planned, Industrial Equipment News is most likely to be read.* If you cannot find your new markets, they will find you—in IEN.

Because Industrial Equipment News reaches the 70,000 product selectors in the top 40,000 establishments in all 452 industries, you cannot miss.

Most manufacturers of important new products will be exposed to your product story if told in IEN.

And you can reach them—every month—for the "petty cash" cost of only $165 a month.

Details? . . . Send for complete data file.

ABP BPA

PRODUCT INFORMATION HEADQUARTERS

Industrial Equipment News

Thomas Publishing Company

461 Eighth Avenue, New York 1, N. Y.

Affiliated with Thomas Register

collectively, make up the major part of a given industry."

Relatively few companies have research facilities comparable with Kimberly-Clark's. The Steiner Co., Chicago, manufacturer of linen and paper towel cabinets, various paper products and other miscellaneous items related to the washroom maintenance market, asked its advertising agency, Marsteller, Rickard, Gebhardt and Reed, Inc., to do a special study of its markets.

Steiner's problem was similar to that faced by many companies today—all things considered, it was doing a good job, but it felt that it could certainly do a better one. Management reasoned that a more definitive picture of the market for towels could be drawn to permit a re-examination of salesmen's territories, its 200 paper distributors' performance, and advertising media coverage.

Because Steiner sold only through a network of paper product distributors, linen suppliers, and sanitary supply jobbers, it shared Kimberly-Clark's problem of being unable to develop a really clear picture of the end-product buyer. However, it was known that industry as a group was the largest customer of its distributors. A decision was made to approach each major market separately—industry, institutions, office buildings, service stations, etc. The object: to learn the total paper towel sales volume, by area, by market, by industrial classification.

In developing industry towel-usage yardsticks, Steiner's Leonard "Lee" Bartlett, advertising and sales promotion manager, and Ronald F. Meadows, manager of research for Marsteller, Rickard, Gebhardt and Reed, found it was necessary to "shortcut" the distributors and go directly to the buyers of towels for purchasing information.

One thousand purchasing agents were interviewed. They were asked what their plants' paper towel purchases were for a specified period of time and how many employes there were in each plant. The results of the survey were coded by S.I.C., and an index of towel usage per employe derived.

"This towel-usage-per-employe figure was then applied to the industry figures in SALES MANAGEMENT'S *Survey of Industrial Buying Power,*" says "Ron" Meadows. "It became a relatively simple process to relate the usage yardstick to the S.I.C. industries. Then, by examining the 100 leading counties, we were able to develop the industry areas of concentration. When the employment figures in the survey were applied to the towel usage yardsticks we were able to come up with some fairly reliable market potentials by area. This case illustrates how a field survey, used in combination with the *Survey of industrial Buying Power,* gave us a relatively inexpensive measure of total industry volume.

"When added to other survey results concerning practices in institutions, office buildings, etc., it gave us a clear picture of where and how large the potential for paper towels is at the present time." Steiner is now in the process of examining its salesmen's territories, developing sales area quotas, measuring distributors' performances, and evaluating advertising media effectiveness with these yardsticks.

Establishing realistic sales potential and sales quota figures often depends on special consideration indigenous to a market or inherent in a product, according to Truman Young, market development manager for Walter Kidde & Co., producers of fire extinguishing equipment.

"In determining industrial potentials, the sales in a well balanced territory are analyzed from the standpoint of sales coverage and diversification," says Young. "Some industries have a higher fire hazard than others and consequently need more fire extinguishing equipment. Within a given industry, the extinguisher potential will also vary in plants employing 20 to 49, 50 to 99, 100 to 499, etc.

Young uses county business patterns with figures based on each industry for each of the counties in each distributor's territory. He then applies a Kidde share-of-the-market factor, which has been derived from special market studies, to find the present level of Kidde business potential. This figure is then put into dollar quotas. There is also an "over-quota" system based on an average of each distributor's "over-quota" achievement during the past three years.

"It's a lot of work to make these series of computations, and to be constantly checking state industrial directories for each business in each of the counties comprising each distributor's territory. That's why we appreciate SALES MANAGEMENT'S *Survey of Industrial Buying Power.* We check the county employment figures in the *Survey* and also the service industries employment figures for the top 100 counties which account for 64% of our volume.

"Our yardstick seems to have worked out very satisfactorily, for it is one that is understood by our distributors and is accepted by them without complaint."

But direct selling has its problems

No one forgets "Time Remembered"

How could he—with Helen Hayes and Susan Strasberg playing in it, with Jean Anouilh authoring it?

So it's a sellout over at the Morosco—no free seats, no Annie Oaklies, no 'paper' to fill the house.

One minute you can hear a pin drop, the next there's deafening applause. The atmosphere is electric.

But ask any actor who's had his ups and downs what it's like to play to 'paper.' "Maybe people don't expect much for nothing," he'll tell you. "Anyway, that's the way a 'papered' house acts—apathetic. Now cash customers, they're with you from the rise of the curtain."

A sold-out house is like a sold-out circulation in our business of advertising and publishing.

We don't say that 'paper' or giveaway circulation doesn't have its place, as when launching a new magazine. We do say this: we give your advertising something significant when we give it an audience that pays to read.

Simmons-Boardman, 30 Church St., New York 7, N. Y.

Simmons-Boardman **TIME-SAVER** Magazines ABC

Circulation Sell-outs: AMERICAN BUILDER . . . MARINE ENGINEERING/LOG . . . RAILWAY AGE . . . LOCOMOTIVES AND CARS . . . TRACK AND STRUCTURES . . . SIGNALING AND COMMUNICATIONS . . . PURCHASES AND STORES

THERE IS ONLY **ONE** WAY TO REACH THE

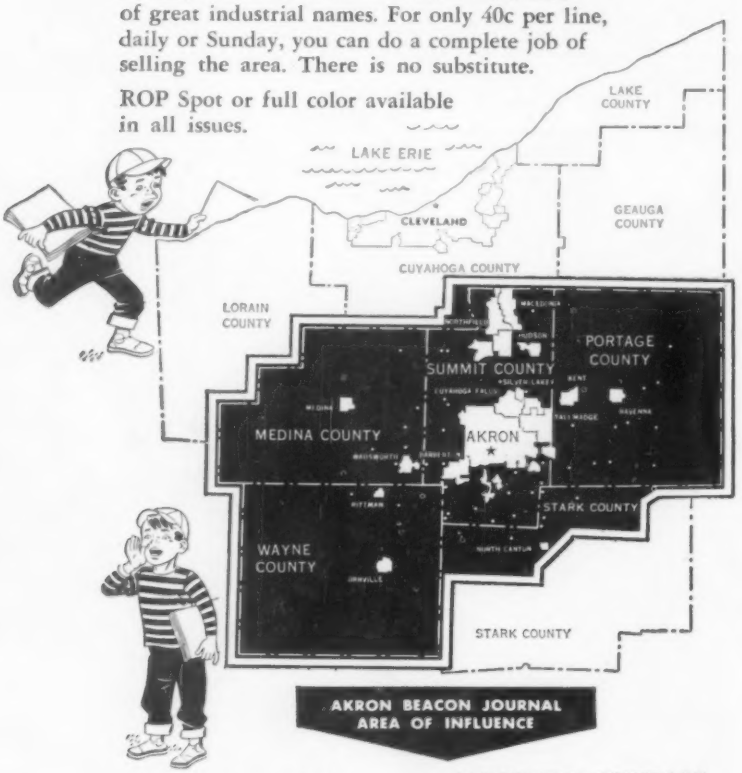
AKRON BEACON JOURNAL

AREA OF INFLUENCE

A One Billion 350 Million Dollar Market

Akron, the biggest ONE Newspaper Market in the nation, is also Ohio's most concentrated area of great industrial names. For only 40c per line, daily or Sunday, you can do a complete job of selling the area. There is no substitute.

ROP Spot or full color available in all issues.



AKRON BEACON JOURNAL AREA OF INFLUENCE

Population	719,435
Families	213,048
Total Buying Power	$1,349,384,000.
Total Retail Sales	$ 958,138,000.
Food Sales	$ 238,114,000.
Gen. Mdse. Sales	$ 132,837,000.
Fr-H-R Sales	$ 44,996,000.
Automotive Sales	$ 205,680,000.
Drug Sales	$ 29,035,000.

Source 1958 Sales Management Survey of Buying Power

NEWSPAPER COVERAGE

DAILY	Circ.	% Cov.
Akron Beacon Journal	156,382	73.4%
Cleveland Plain Dealer	21,931	10.3%
Cleveland Press	5,981	2.8%
Cleveland News	1,938	0.9%
SUNDAY		
Akron Beacon Journal	155,877	73.1%
Cleveland Plain Dealer	21,193	9.5%

Source March 31, 1957 A. B. C. Audit Statements

AKRON BEACON JOURNAL

"Ohio's Most Complete Newspaper"

JOHN S. KNIGHT, Publisher — Represented by STORY, BROOKS & FINLEY

too. Take the Roots-Connersville Blower Division of Dresser Industries for example. The company has been manufacturing air- and gas-handling equipment for more than 100 years. Products range from small units to aerated fish tanks and gas meters, through vacuum pumps for paper mills and giant combustion blowers for steel mills, back to fish again—in the form of ballast blowers for atomic submarines. Almost any sizable manufacturer or service institution is a potential customer for the division's eight direct-selling sales offices and 15 manufacturers' representatives.

Recently Roots-Connersville's top management asked market research analyst William G. Stehr to make a territorial analysis of the potential market. What was needed was a sales *index* rather than a sales *quota*, says Stehr whose "order" called for a yardstick to evaluate sales performance, apportion the sales budget, and determine regional acceptance of various products.

"As plans progress," says Stehr, "it became apparent that the best way to approach the problem was to study applications and users rather than the company's product line. Many possible statistical ingredients were examined, as if by the most temperamental chef."

Roots-Connersville's latest family receipe for its "Sales Index" is outlined below:

1. The index is one third dependent upon activity and capital expenditures in ten industrial classifications (S.I.C.). Calculation of this figure is based on an average of SALES MANAGEMENT'S *Survey of Industrial Buying Power* figures for employment and value added by manufacture in each industry group's 100 leading counties. To this is added a weight factor based on McGraw-Hill's "Business Plans for Capital Spending" and "The Pulsebeat of Industry."

2. The second element of the Roots-Connersville Sales Index is a measure of all manufacturing based on *Survey of Industrial Buying Power* figures for industrial employment in counties with industrial employment of 1,000 or more.

3. The third ingredient is a measure of commercial activity based on the copyrighted "Buying Power Index" of SALES MANAGEMENT'S *May 10 Survey of Buying Power.*

These three factors are averaged arithmetically to give the percentage of the domestic market in each of 23 sales territories. Stehr does not further "weight" the resultant figure because "difficulties might arise if sales were dependent on large orders for specific construction projects, or if

the two sides of every penny spent for sales

This is the familiar side of the *selling* penny . . . the side that portrays the salesman, who, in the course of selling, strives to bring to one successful conclusion the many related activities of advertising, distributing, servicing.

This is the *buyer's* side of the same penny . . . the side that calls to mind the typical industrial buyer's problems of finding the right information about products, comparing available types and makes, selecting companies to contact.

It is significant that this side of the penny bears the legend, IN GOD WE TRUST, for all too often the buyer has no other reliable source on which to pin his faith. He grasps prayerfully at such information as is available, and *trusts* that it is adequate. And if it isn't, Lord help him!

* * *

To us it seems that the industrial marketer has here not only an *obligation* to those who may want to buy his product—he also has an *opportunity*—the opportunity to speed sales at lower unit cost by *helping buyers buy!*

The Schuyler Hopper Company

12 East 41st Street, New York 17, New York LExington 2-3135

"Ditch-Digging Advertising"* that Sells by Helping People Buy

*REG. U. S. PAT. OFF.

you make your mark today . .

To carve out your share of tomorrow's big sales in the $41-billion Original Equipment Market, your product *must get into the specifications today.*

Materials, component parts and finishes are being engineered *right now* into the new products of '59, '60 and '61. Action *now* controls your sales for tomorrow . . . 19% of metalworking industry products in 1961 will be items not in existence today.*

This immediate future market is huge. This year, $8.3 million — or 14% more than in 1957 — will be poured into new product development.* Few, if any industrial markets today, enjoy such stepped-up activity. Your OEM sales future depends on the product design engineer. Helping him is *Product Engineering's* meat.

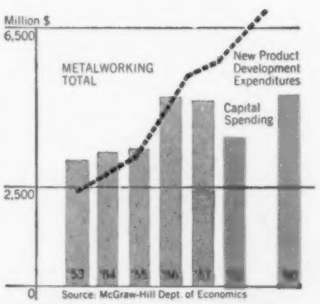
Product Engineering The McGraw-Hill weekly magazine of

. . . . . or you lose tomorrow

Because it is manned and geared to do the job, these key men rely on *Product Engineering* for the wide scope of up-to-date information they need to make their vital, far-reaching decisions. By far the largest OEM editorial staff gives these men the most, the best — first — every week.

You can expect a big sales roundup tomorrow . . . only if you *make your mark* with these men *today*. *Product Engineering* gets through to these initiators of OEM buying with over 41,000 paid subscriptions.

*From McGraw-Hill's just-published booklet, "Business' Plans for New Plants and Equipment 1958-1961." If you'd like a copy, just drop a note to *Product Engineering's* Market Research Dept.



Design Engineering and Product Development • 330 West 42nd Street, New York 36, N. Y.

ABP ABC

Measure Your Market — Then Make Your Sales

By L. C. MONTANT, JR.

Manager, Sales Analysis & Market Research
Insulation Division, The Eagle-Picher Co.

1. **Define your market.** Which are the industries you sell? Do all of them buy at the same rate? Or are some industries, size for size, better customers than others.

2. **Try to establish a consumption pattern for each industry.** In most cases, each industry buys at a different rate from others. To cite an obvious example, a truck line or a taxicab company is a better prospect for tires, batteries and lubricating oil than a textile mill.

3. **Develop an industry yardstick.** Employment is usually a good one. But your product may be one (like an alarm system) that follows the number of plants more closely than the size of plants.

4. **Match your actual sales up against your market index.**

5. **Start asking questions.**

Also bear these points in mind:

6. **Industrial markets change rapidly — almost overnight.** The smaller markets and the one-industry markets particularly. This puts a heavy premium on keeping your market index current. SM's Industrial Survey is particularly valuable in this respect. It updates the figures about as quickly as any source — and more inexpensively than most private sources.

7. **Be factual—not fancy.** You don't need to use elaborate statistical techniques to develop useful and profitable yardsticks out of the data in SM's Industrial Survey. Lots of market indexes consist of nothing more than percentages, area by area, of some basic series.

8. **Look at market indexes as a tool—not an end in themselves.** It's easy to say, "You can't measure without a yardstick." But if your yardstick is a rubbery one—with a fair amount of built-in error, don't regard it as the answer to all sales management problems. Remember, your competition may have heard of this approach, too.

business were too heavily concentrated among a few original equipment manufacturers."

Stehr claims that actual performance has been fairly close to the index established for each territory. The index does, however, point up certain areas in high and low performance.

Stehr offers a word of advice: "Comparison of performance with any index is not an absolute measure of sales effectiveness any more than the percentage standing of a baseball team is a measure of the league. It can be used only to measure *relative* performance."

Mixing statistical sources and correlations to find relative potential is also practiced by Senior Market Analyst N. Wayne Millner at The Black & Decker Mfg. Co.

In the initial stages, Millner ran simple correlations between actual sales performance records and various sets of statistical data. Four different indicators yielded very high degrees of correlation to sales. So a combination of all four indicators was welded into a single yardstick to evaluate potential in each sales territory.

The four indicators were:

(1) Number of employes in manufacturing—based on figures from the *Survey of Industrial Buying Power.*

(2) Sales of hand and power tools (and accessories)—from studies compiled by the American Supply and Machinery Manufacturers Association, Inc.

(3) Sales by machinery and equipment distributors—from the U.S. Census of Manufactures.

(4) Value added by manufacturers —from the U.S. Census of Manufactures.

"To use manufacturing employment," Millner explains, "we first grouped the number of employes into each of our sales territories. The *Survey of Industrial Buying Power* gave us the most up-to-date data available and in the most convenient form. After grouping industrial employment by territories, we divided the number of employes in each territory by the total employment in the U.S. This gave us the percent that each of our territories represented in the whole country.

"The same system was used for each of the other three indicators. Then we averaged the four to derive what we call the *relative potential* in each territory."

Millner's next step was to estimate the total portable electric tool and accessory volume done by all manufacturers in the U.S. This estimate was then proportioned for each sales territory using the *relative potential* percentage as the variable. By then com-

How to stand out in a crowd

In any crowd of competitors, one company always stands out. It is the leader. It may not be the biggest, or the oldest. But it is recognized as the *best*. Its product name is usually the accepted synonym for desirable excellence in its field. It is most apt to have a comfortable back-log of orders—most apt to show the most consistent profit.

It is also, usually, a living—and very healthy—testimonial to the effectiveness of an important marketing principle.

That principle is this: In the long run it profits you far more to sell your product on its *value* rather than on its *price*.

Almost everyone will agree with that principle in theory; but many violate it in practice. It is often so easy to pick up quick sales by promoting "special prices" or "deals". And it is so hard to resist the temptation to fight fire with fire when price-cutting competitors are apparently hurting you.

But when you get down and fight the "price" merchandiser on his home grounds, and by his rules, you place yourself in danger of losing much and gaining little. You identify your fine product with his and destroy, in the minds of customers, some of your product's distinctive *value*. Your short term sales gain is apt to be at the cost of the kind of customer respect which creates long term growth.

Perhaps the main reason more manufacturers do not sell on value rather than on price is that selling on value is far more difficult than selling on price. It requires, of course, a product that *has* value—but that is only the beginning.

It also requires the marketing wisdom to know what specific "character" you should create for your product to best set it apart from all others of its kind. And then it requires the creative skill to crystallize that character on paper or on the air waves, and project it into the minds of the right people at the right time.

It requires something else, too—the lonely courage to stand out from the crowd, to *tell your own story consistently*, year in and year out, regardless of the varying tactics of competition. Perhaps this is the rarest quality of all; it is sometimes called Leadership.

Many of our clients believe as strongly as we do that marketing on the basis of value, rather than price, pays off in long term profits and growth. Together we've proved it, at least to our mutual satisfaction. Forty-one of our clients are leaders in their respective fields.

Marsteller, Rickard, Gebhardt and Reed, Inc.

ADVERTISING

NEW YORK • PITTSBURGH • CHICAGO • HOUSTON

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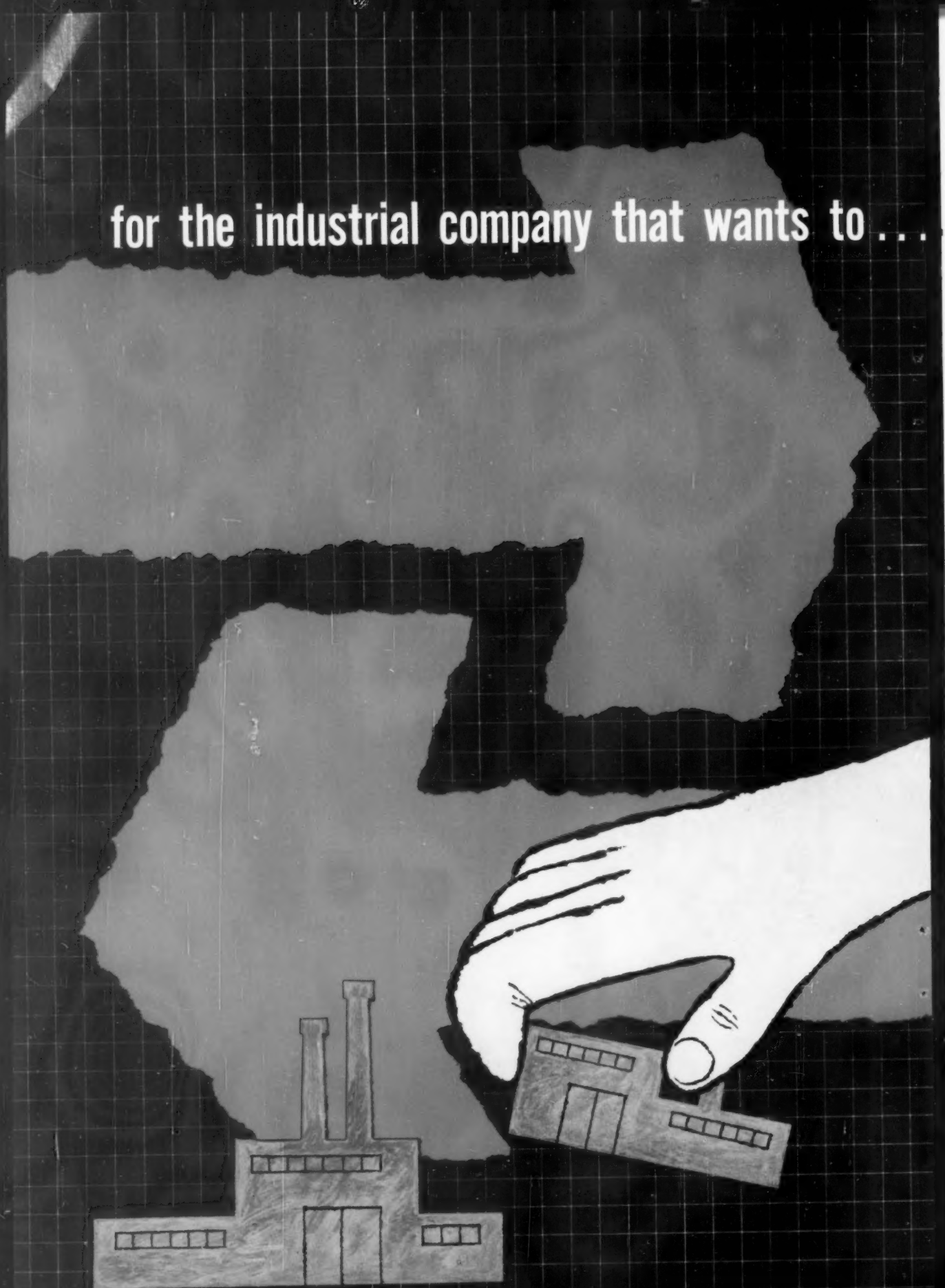
PUBLIC RELATIONS • BURSON-MARSTELLER ASSOCIATES, INC.

MARKETING COUNSEL • MARSTELLER RESEARCH, INC.

for the industrial company that wants to . . . .



. . . grow faster than competition

To *grow faster* than competition you've got to get a *bigger* share of the market—and there you're in for a *tough* fight.

This fight will be won by the company that does the best *marketing* job.

The old tried and true "make it first, sell it second" methods aren't enough. To move more goods within industry today at a profit, you have to know your markets better than ever before —know what is needed, wanted. And you have to find a way to sell faster and more forcefully to more customers and prospects.

A big part of the answer is found in a stronger program of *two-way communication.*

Communication *from* your market gives you the information you need to set up sales goals and sales strategy. A great deal of this information has already been gathered for you. For instance: N.E.D.'s "How to Get Industrial Buying Action"; FOUNDRY's "Foundry Industry Marketing Guide"; AUTOMATION's "Confidential File"; STEEL magazine's statistical book— "Metalworking Markets in the U.S."; MACHINE DESIGN's "Geographical Analysis of the Original Equipment Market" and specific product studies.

Improved communication *to* your market lets you speed the selling process by contacting more of the right people, fast. It's the most economical way to solve the sales problems of industry's complicated group buying patterns.

Winning the readership and acceptance of the *right* people— industry's buying group—is the contribution PENTON's five selective industrial publications make to modern marketing programs.

Strengthen your own communications to the market with PENTON publications. Any Penton man will be glad to show you how high readership adds a plus value to even the best advertising campaign.

the PENTON publishing company

cleveland 13, ohio

AUTOMATION / FOUNDRY / MACHINE DESIGN / NEW EQUIPMENT DIGEST / STEEL

When salesmen must be moved...

Only too often the transferred salesman is an unhappy salesman, his effectiveness lessened by the emotional upset of tearing his family loose from familiar surroundings and establishing new roots in a strange community.

Because these psychological problems are so frequent, and so hard to deal with, Greyvan Lines has instituted

A Continuing Research Study in
The Human Side of Moving

First results of this study are now available. They will help you to understand the real reasons why so many men object—or even refuse—to move. They show that such fears are often unfounded. Most importantly, they offer real help to the Sales Manager who must persuade a valued salesman—and his wife—to accept a transfer as an opportunity and not as a tragedy. In the short time this program has been operating, we have received hundreds of letters testifying to its usefulness.

This study was undertaken as a service to business. There is no cost or obligation. Any interested company executive may receive on request a loose-leaf binder containing the material issued to date, and his name will be put on a special mailing list to receive new reports as issued. Just ask for the Manual on "The Human Side of Moving" and address:

L. F. Mitchell, General Sales Manager,

LONG-DISTANCE MOVING & STORAGE

GREYVAN LINES

THE GREYHOUND MOVERS

General Office: 57 West Grand Avenue, Chicago 10

paring sales with this figure, Millner is able to determine Black & Decker's share of the market in each territory.

"This method of territorial sales analysis has enabled us to strengthen our sales organization in those areas which had below average penetration," says Millner. "It has been a valuable tool to our field managers in guiding all their sales activities."

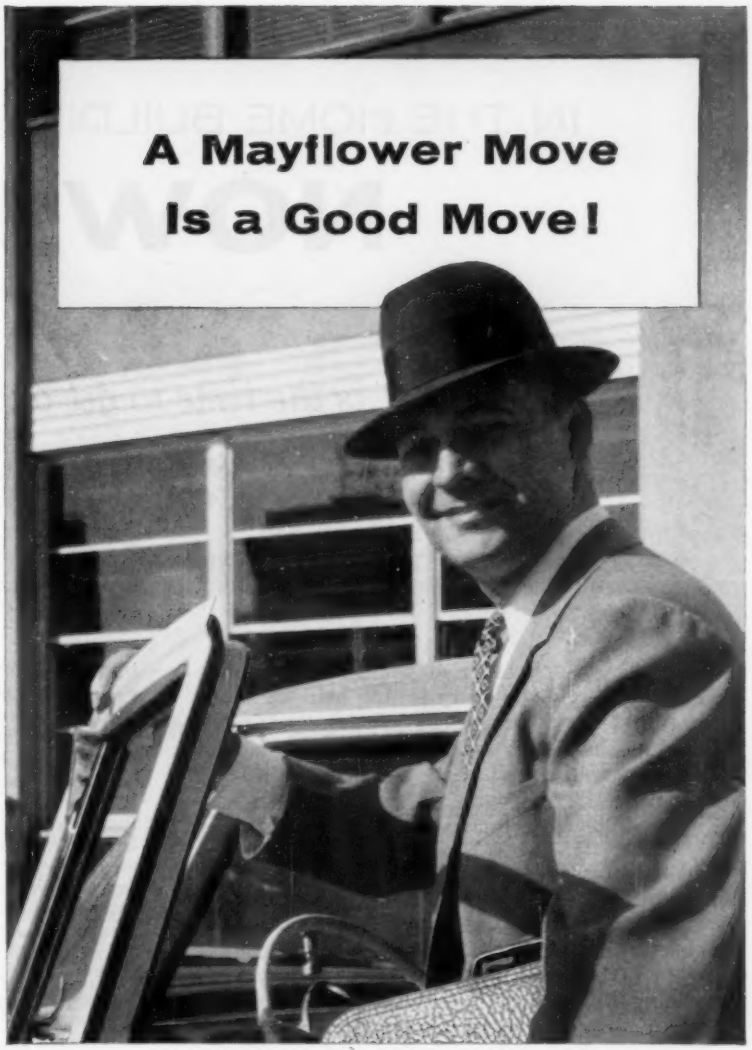
The *Survey of Industrial Buying Power* is also being used by virtually every advertising agency with industrial clients. J. Walter Thompson, Fuller & Smith & Ross, Schuyler Hopper; Marsteller, Rickard, Gebhardt and Reed (as previously noted); G. M. Basford, James Thomas Chirurg, and Sanger-Funnell—are only a few of the agencies that find the *Survey* a helpful fund of information.

At G. M. Basford Co. (1957 billing: $14.1 million), Vice-President John DeWolf heads a well-organized research department with complete facilities for probing the statistical depths of all advertising and marketing problems. Recently he and Vice-President Daniel F. Charny worked out a study of the industrial market for in-plant air-control and processing equipment for one of the largest manufacturers selling to that market. The study is still in the hush-hush stage, but it was found that the company's major and minor markets could be determined by applying most of the S.I.C. category information for major groups 28 through 39 contained in the *Survey of Industrial Buying Power*. Basford has already been able to determine that 90% of the in-plant air-control market is represented by four industries.

On a more general basis, Clifford G. Culbrantsen, account executive at Basford, says that the *Survey* is "very helpful in selecting areas across the country for regional campaigns promoting general industrial values for the petroleum and chemical industries." The *Survey* is now being widely studied by other account executives.

Toward the other end of the billing spectrum is Sanger-Funnell Inc., a relatively small industrial and trade agency (1957 billing: $1.15 million) with limited research facilities.

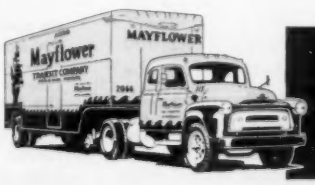
Says Vice-President Robert L. Neff: "Because we do not have a full-fledged marketing department, our account executives need a condensed, ready-reference source for the type of statistical data that can help us determine the most likely areas for increased activity in both advertising and sales. We find SALES MANAGEMENT's *Survey of Industrial Buying Power* of tremendous assistance in planning our clients' advertising budgets and marketing moves."



Any man you move for your company is an *important* man in your organization. If he weren't, you wouldn't be transferring him. You'll find that your salesmen and sales executives have confidence in Mayflower when their move comes. Here, for instance, is a note we received from a recent customer whom we moved from Wallace, Idaho to Richmond, California:

"All the service was excellent. I would heartily recommend Mayflower, and I shall do it if the opportunity presents."

It's a mighty good move to call Mayflower for your personnel transfers . . . Just phone your nearby Mayflower agent for world-wide moving service.



AERO Mayflower
WORLD-WIDE MOVERS

AERO MAYFLOWER TRANSIT COMPANY, INC. • INDIANAPOLIS

IN THE HOME BUILDING MARKET

NOW IS THE

NOW *is the time to get out and sell*

NOW *is the time to show what we can do*

Congress and the President have gone all out to give us every selling help we asked for—VA, and no-down, and easy money, and easier FHA terms than ever, and easier FHA income requirements, and a call on the Treasury for $1.5 billion if we have trouble getting all the money we need at low interest from private lenders.

But nothing Government can do can assure the home building pick-up the President is counting on to lead the national economy back up from the recession. Easy money and easy terms won't make people buy houses they don't want to buy. The Government's help won't avail very much or avail very long unless everyone in our industry—builder, architect, lender, realtor, dealer, and producer—pitches in to make the program work.

People won't buy more houses unless they believe they are getting their money's worth—and giving them more for their money is up to us.

People won't buy more houses unless they are sold much better and harder—and that selling and advertising job is up to us.

People won't buy or modernize more houses unless they are better sold on the economy, convenience, and livability offered by such new features as insulation, air conditioning, big roofs, built-ins, labor-saving package kitchens, second baths, sliding glass walls, acoustic ceilings, double glazing, etc.—and that's another selling and advertising job that is up to us.

This is the time for all of us to stand up and deliver. This is the time for all of us to offer the best values ever and sell them as never before. And, most specifically . . .

NOW *is the time to*
PRICE OUR PRODUCT BACK INTO THE MARKET

Biggest reason our sales sagged off last year was not tight money; sales were slow even where builders could still get FHA loans at par (as on Long Island or in New England).

Biggest reason our sales sagged off was this:

Buyers balked at paying $15,000 for a $12,000 or $13,000 house—$15,000 for a house no better than the house they could have bought $2,000 or $3,000 cheaper in 1954. We let ourselves be squeezed out of the market by wage inflaters, price inflaters, and land cost inflaters—and we paid the price in slower sales. Says Ben Fischer, the CIO-AFL housing expert: "The home buyer was offered less house for more money, so he chose to spend his money for something else."

Here is what the 1957 home buyer got for his extra money:

He paid for discount inflation. He paid up to $1,000 a house for discounts (open or buried) to pay for a phoney fixed interest rate on FHA-VA loans.

He paid for price inflation and wage inflation. He paid up to $1,000 more for higher prices for the same materials and higher wages for the same labor with the same featherbedding and the same code-entrenched waste.

He paid for land price inflation. He paid up to $1,000 more for land and got in return a less desirable lot further out—because land speculators discounted the next ten years' rise in land values and pushed land prices up through the roof.

For that same $3,000 for which we gave the home buyer nothing at all, we could have offered him truly irresistible sales appeals—if only the discount takers and the land speculators and the price and wage inflaters hadn't gotten there first

TIME...

and made off with the $3,000. For example:

We could have used that $3,000 to add to his house

1. air conditioning, plus
2. full insulation, plus
3. an automatic laundry, plus
4. acoustic ceilings, plus
5. a paved patio with a sliding glass wall, plus
6. the whole kitchen package of labor-savers and wife-savers – refrigerator, range, built-in oven, dishwasher, disposer, exhaust fan, kitchen center, and all. We could have had the house designed by a first class architect, and perhaps we could have thrown in
7. double glazing, plus
8. a big roof overhang, plus
9. a couple of big trees!

So let's stop trying to cover the cost of waste and inflation by stripping all the sales appeals out. Let's squeeze the waste and inflation out, so we can put in more sales appeals.

NOW *is the time to*
GO AFTER OUR BIG NEW MASS MARKET HARD

Today's mass market for homes is not the dwindling market for cheap houses–a market that gets smaller each year as the number of families with incomes under $5,000 continues to decline. In constant dollars the number of these families who cannot qualify FHA for houses costing over $12,500 has shrunk from 18,233,000 in 1941 to 15,064,000 in 1956. They are now less than 40% of the total – but 80% of today's 50,000,000 homes are priced to fit their purses.

Today's new mass market for houses is the quality house–a quality house for the 23,322,000 families whose $5,000-plus incomes qualify them FHA for a $12,500-plus home, and the 11,712,000 families whose $7,500-plus incomes qualify them FHA for a $17,500-plus house. Here is a market for 23,322,000 homes in a price class for which less than 10,000,000 homes are now standing.

Every other big durable goods industry finds its best prospects among present owners trading up. Nine new cars out of ten are sold to present car owners who want something new and better. That's why the auto industry has been able to upgrade its product every year. That's why the auto industry no longer builds any cheap cars at all. That's why today's mass market for cars is a Ford that costs seven times as much as the Model T, a Plymouth much bigger than the 1929 Chrysler, a Chevvy twice as plush and three times as powerful as the 1929 Cadillac.

Owning an old car makes it twice as easy to buy a new and better car, but owning an old house still makes it twice as hard to buy a new and better house–because we don't have a good trade-in financing plan.

That, in a nutshell, is why our industry is finding the used house our toughest competition instead of finding it our best steppingstone to bigger sales. That's why we can't tap the $100 billion equity tied up in used homes–the $100 billion equity that could provide the cash needed to sell 20 million quality homes. That's why we are still stuck in the cheap house market, trying to sell stripped-down new houses to people who should be buying used houses and so letting the present owners of those used houses trade up to a quality house.

That's why the president of the National Association of Home Builders is right when he says the biggest help Congress could give us this year would be to legalize trade-in financing that would make trade-up work.

from the June 1958 Editorial

House & Home
home building's only industry magazine

PUBLISHED BY TIME INC., 9 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.

How to Turn S.I.C. Production Data into Consumption Data

S. I. C. data tell the industrial sales executive what various plants produce. But he is concerned primarily with finding out whether they consume his product in the manufacture of their products. The authors demonstrate how the data can be translated into market consumption information.

The Bryant Chucking Grinder Company set up more efficient channels of distribution, rearranged their sales territories, and established useful yardsticks of area market potential through the use of S. I. C. *consumption* data.

The American Dynamics Corporation was able to determine product specifications and locate many valuable prospects through a product development program using S. I. C. *consumption* data.

S. I. C. data such as those found in the SALES MANAGEMENT *Survey of Industrial Buying Power*, the Census of Manufactures, and County Business Patterns are S. I. C. *production* data. From these sources you can find out how many manufacturing plants are *producing* what, where.

What the industrial sales manager wants to know is: how many plants are *consuming* what, where. Specifically he wants to know about the consumption of his kind of product.

Fortunately there are various ways of translating S. I. C. production data into S. I. C. *consumption* data. This article points out several ways of making such traslations and shows how to use S. I. C. *consumption* data once you have them.

First we will show for consumption data *what it is;* next we will show *how and where to get it;* finally we will show *how to use it.*

Sales-Planning-Blueprints©

The most complete and useful forms of S. I. C. *consumption* data are found in Sales-Planning-Blueprints. Part of page one of a typical Sales-Planning-Blueprint, prepared for a manufacturer of an industrial component, is found in Table 1, page 63.

In order to protect the anonymity of the manufacturer, we have called his kind of industrial component Product A. Product A does not stand for a brand name but rather refers to a kind of industrial component made by several competing manufacturers. It is an actual product for which S. I. C. *consumption* data were gathered and processed; it is not an hypothetical product. All names and addresses in Table 1 are fictitious; however, the data in the body of the table are taken from an actual Sales-Planning-Blueprint.

Assuming you are the sales manager for our firm producing Product A, here is what the S. I. C. *consumption* data in your Sales-Planning-Blueprint gives you:

(a) The names and addresses of manufacturing plants that use your kind of product.

(b) The name and title of an official, of each plant, responsible for the specification and purchase of your kind of product.

(c) In each case, the kind of business the plant is in (e.g. a textile machinery plant, a clay refractory, a meat packing plant, etc.).

Each of these first three kinds of S. I. C. *consumption* data about your kind of product are found in column 2. For instance, one plant using your kind of product is Johnson and Norstad, 789 Fourth Avenue, Chicago, Illinois. J. R. Nygren, Manager of Manufacturing, is responsible for the specification and purchase of your kind of product. This is a textile machinery plant.

(d) The 4-digit S. I. C. number of the plant.

By

NATHANIEL R. KIDDER

President, Kidder and Company,

and

FRANCIS E. HUMMEL

Manager of Marketing and Merchandising

The Bassick Company

(e) The size of the plant, in terms of the number of production workers.

These two kinds of S. I. C. *consumption* data are found in column 1. For instance, the DEF Machine Company is in S. I. C. number 3542, and has 85 production workers. As pointed out below, this information is very valuable in such things as determining market potentials, selecting advertising media, etc. It is also of more immediate value in sizing up the plant and preparing for the sales call.

(f) The particular application each of these consuming plants has for your kind of product and the end products in which they are incorporating the components you are selling.

These kinds of S. I. C. *consumption* data are found in columns 3 and 4 respectively. For instance, the GHI Company of 123 Eighth Avenue, Hammond, Indiana, a manufacturer of scientific instruments, is using your kind of product for sealing out dust and vibration damping on their dial indicators. These *consumption* data are not only available to you in your immediate sales planning but, as is pointed out below, are of great value in planning your publicity and advertising campaigns.

(g) The names of your competitors from whom these plants are buying your kind of product.

(h) How much each of these plants is spending on your kind of component.

Assuming your company is the National Company, all of the plants listed, except one, are buying Product A from your competitors. For instance, ABC Store Engineering Service is buying $4,500 worth per year from your competitor, the Acme Company. This information is given in columns 5 and 6. The part of the page of a Sales-Planning-Blueprint shown here (Table 1) would indicate that your competitor, the Consolidated Company, dominates the sales of your industry in the Chicago, Illinois-Gary, Indiana, industrial areas.

These S. I. C. *consumption* data in columns 5 and 6 and the rest of the Sales - Planning - Blueprint not only show you where your competitors are getting the business but also the amount and kind of business they are getting. This is of great importance in your whole promotional activity.

(i) Any gripes and comments users

SIC LISTS

CREATIVE OFFERS 951 SIC MAILING LISTS

THE STANDARD INDUSTRIAL CLASSIFICATION system is the most positive method of market selection ever developed.

•

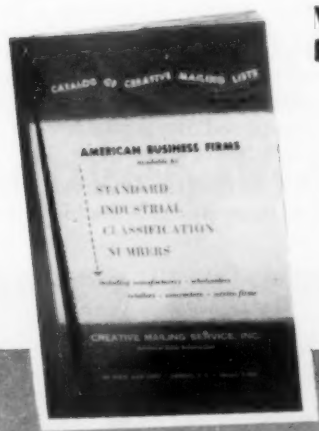
Creative Mailing Service has available, by 4-digit SIC number, 951 separate and distinct mailing lists.

•

These mailing lists represent the names and addresses of more than one million American business firms . . . . with the SIC number of each firm.

•

The names are available, as mailing lists or prospect lists, by SIC number and they are non-duplicating. All major industrial and commercial groups are represented, including manufacturers, contractors, service firms, retailers and wholesalers.



WRITE FOR FREE CATALOG

A new, 78 page catalog has just been issued. It shows list names, SIC numbers, quantity of names on each list, and prices. Copies are available, without charge, on request.

HERE ARE 10 WAYS CREATIVE'S SIC LISTS CAN BE OF HELP TO YOU:

1. Saturate a specific market
2. Supplement space advertising
3. Announce new products
4. Introduce Sales Representatives
5. Ask for inquiries and leads
6. Research new markets
7. Distribute case histories
8. Questionnaire an industry
9. Institutional direct mail
10. Sell by mail

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460 North Main Street, Freeport, N. Y. · Freeport 8-4830

Dynamic/market coverage by Conover-Mast... **BUSINESS and COMMERCIAL AVIATION**

Pacing today's business and commercial aviation – a big market getting bigger FAST

Recent years have brought tremendous expansion of the business and commercial phases of Aviation. Today, over 20,000 business and utility aircraft are logging three times as many hours as the airlines. And, domestic scheduled airlines are averaging over 100,000 passengers *daily* – have on order more than $3 billion worth of new aircraft.

Aircraft used for business purposes have greatly increased in efficiency, speed and range. Accessory equipment has become more sophisticated. Corporate aircraft owners and pilots have a more vital need for information to help evaluate new aircraft and related equipment; procedures, techniques.

Among the airlines, repair, overhaul and modification centers – among terminal and non-terminal airports – dealers and distributors – the situation is the same. They too have developed a more pressing need for information to help them cope with new operations and maintenance problems.

Recognizing these needs, Conover-Mast launched BUSINESS and COMMERCIAL AVIATION Magazine in January 1958 – serving the men who manage, operate and maintain business and commercial aircraft. It is the only publication specifically designed for this field.

BUSINESS and COMMERCIAL AVIATION's editorial emphasis is on *useful information* . . . dealing with descriptions,

Aviation Age
Published monthly for technical management men who design, engineer and build – Aircraft – Missiles – Spacecraft.

Business/Commercial Aviation
Published monthly for the men who manage, operate and maintain business and commercial aircraft.

Construction Equipment
Published monthly for buyers of equipment and materials in the widespread construction market: contracting, government, industrial.

Mill & Factory
For production and maintenance engineering men – responsible for the methods, equipment and supplies used throughout industry. Published monthly.

specifications and flight evaluations of business, utility and transport aircraft and related equipment; studies on improved use of aircraft and related equipment; piloting techniques, procedures and proficiency; navigation, weather, communications, air traffic control; maintenance methods, equipment, tools and materials; airport and ground operations; service operations; management problems and industry trends.

This is the type of information *needed* to run a safer, more efficient and profitable operation.

BUSINESS and COMMERCIAL AVIATION Magazine is another example of dynamic market coverage by Conover-Mast—enabling advertisers to pinpoint a profitable market with maximum effectiveness.

What is dynamic market coverage?

- Building a magazine for the buyers in a market and focussing so sharply on their interests that nobody but buyers would read it . . .
- Discovering the best method of getting the magazine to the most important buyers, and to nobody else . . .
- Forever checking with readers to make sure the magazine serves their needs, that they read it regularly . . .
- Being perpetually dissatisfied with every known publishing method and technique—including our own.

Take readership for instance

At Conover-Mast readership is not taken for granted. Instead, we carefully plan for it and take great pains to make sure it is achieved. Readership, we believe, is the result of reaching the right people in every market we serve, plus delivering the kind of information they need and want. It's the end-product of combining dynamic market coverage with an editorial service that's fitted to the current requirements of the reader.

DynamiC/Market coverage

Conover-Mast PUBLICATIONS

NBP ABP

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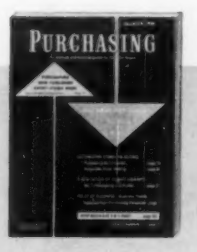


Purchasing
The methods and news magazine for industrial buyers — published bi-weekly — giving purchasing agents information on modern buying techniques, news, and significant market trends.

Volume Feeding Management
Published monthly for volume feeding specialists in restaurants, hotels, schools and colleges, clubs, hospitals, employee feeding facilities, etc.

Aviation Age — Research and Development Technical Handbook
Published annually as technical reference and buying guide for engineers and other technical management men responsible for systems engineering of Aircraft — Missiles — Spacecraft.

Conover-Mast Purchasing Directory
For purchasing and plant engineering executives who need quick, accurate and complete information on sources of industrial products. Total annual circulation is 27,000 copies.

have about your kind of product.

These data are found in column 7. For instance: EFG Textile Machinery Company, buying $17,000 a year from your competitor, Consolidated Company, complains about slow delivery on special sizes. What a wonderful talking point this gives your salesman! Even in the case of your own customer, Johnson and Norstad, you may not have known they were thinking of using your product as a friction disk. You may very well have a reinforced type that they could use but which they have never seen.

Look at BCD Rolled Thread Die Company. Wouldn't it be profitable for you to have them use samples of your Product A rather than Consolidated's? It would be an opportunity to get in on that $22,000-a-year account.

Even better, look at Scientific Instrument Company, the last one in column 2. It might be worthwhile making Product A in unusual thickness increments if it would mean taking this $45,000-account away from Consolidated.

Needless to say these gripes and comments are not only of value to the salesman but can be used effectively in your whole promotional campaign, and in determining engineering specifications in product development. These applications of S. I. C. *consumption* data are discussed below.

HOW TO PRODUCE SALES-PLANNING-BLUEPRINTS

How do we go about translating S. I. C. production data to S. I. C. *consumption* data and producing a Sales - Planning - Blueprint? The first step is to determine the 4-digit S. I. C. categories of the manufacturing plants in the market. The thing to keep in mind is that manufacturing plants buy products and services to solve production, distribution, or control problems, and that there is a relation between the nature of the problem and the function of the item being produced. Thus Chesterfield bought Accu-Ray to solve a control (and perhaps an advertising) problem, while a General Motors automotive plant would buy a machine tool to solve a production problem.

The manufacturing plants in your market are those whose problems can be solved through the use of your product. The S.I.C. groups plants according to what they make, which is a roundabout way of classifying them according to the problems they have.

Determining the 4-Digit Categories in Your Market. Therefore, the way to begin determining the 4-digit S. I. C. categories of the plants in your market is to find out the 4-digit classification of your customers' plants. They must have problems that can be solved through the use of your product or they would not have bought it from you in the first place. If you have sold your koalin to be used as an extender by one paint company you should include S. I. C. 2851 (Paints, Varnishes, Lacquers, and Enamels) in a listing of the 4-digit S. I. C. categories of the plants in your market.

Some of the state industrial directories listed in the SM Table of State Industrial Directories, pages 73-78 of this issue, can be of help in determining the S. I. C. classification of your customers. For instance, you can look up any of your New York state customers in the Industrial Directory of New York State. This has an alphabetical listing by company name that is cross-indexed to the product section, which is arranged by 4-digit S. I. C.

You must keep in mind, however, that a sales analysis giving you the S. I. C. numbers of your customers tells you only about your past sales accomplishments, and nothing about potential markets not yet approached.

A second way of determining the 4-digit S. I. C. categories of the plants in your market is to have someone thoroughly familiar with the applications of your product go through the S. I. C. manual and pick out the 4-digit industries whose problems could be solved with your product. For example, in a case involving turret lathes, the Jones & Lamson Machine Company first had its sales analysis department make out punch cards indicating, with other data, the 4-digit S. I. C. numbers of its turret lathe customers for the past five years, then had two of the district sales managers go through the S. I. C. manual and check off those 4-digit S. I. C. categories they believed had production problems calling for the use of turret lathes.

A third way is by soliciting industries. This method is particularly applicable to a new product, or any product whose present customers may not encompass all the S. I. Cs. in the potential market. This can be done with the help of several business publications. Responding plants can be classified on a 4-digit S. I. C. basis, thus indicating the extent of the market among the S. I. Cs.

Example: High speed electrical wheel heads were developed by the Bryant Chucking Grinder Company as a part of the tooling for precision internal grinding machines. These ultra-high speed devices obviously had other industrial applications in other segments of industry. So they were promoted widely through general business magazines. The campaign, consisting of advertisements and news releases, produced many inquiries for further information and quotations were asked on certain engineering applications. The inquiries were tabulated according to the S. I. C. of the inquiring plant. a number of S. I. Cs. were singled out as indicating substantial interest in the product.

Making a Market Survey. Determining the 4-digit S. I. C. categories of the plants in the market is only the first step compiling S. I. C. *consumption* data and producing the Sales-Planning-Blueprint. The second step is to survey the plants in these 4-digit categories for detailed information on whether specific plants are in the market, the extent to which they are in it, and the way in which they are in it.

In the case of Product A, this was done by sending a questionnaire to manufacturing plants in the categories in Product A's market. The questionnaire asked whether or not the plant used Product A (remember Product A is a kind of product made by several manufacturers, not a brand name), the number of production workers in the plant, the name and title of the official responsible for the specification and purchase of Product A, the application of Product A, the products in which it is used as a component, from whom the plant purchases it, the approximate amount purchased per year, and any gripes or comments.

With an initial mailing to several thousand manufacturing plants, in over 100 four-digit categories, plus one follow up mailing, a response was secured from 53% of the plants.

To get substantial information of the kind in the Sales-Planning-Blueprint, Table 1, certain steps are essential.

(1) The questionnaire and accompanying letter must be very carefully developed.

(2) Both must be thoroughly field-tested before the first mailing.

(3) If possible, an outside group should conduct the survey.

(4) A great deal of attention should be given to both the selection of the mailing list and the details of letter-shop work involved.

Every day in the year, $120,000,000 worth of original, non-routine purchases are made by American Industry. To locate sources of supply for this vast demand Industry refers to Thomas Register 70,000 Times a Day!

To get your share of this market, use

THOMAS REGISTER

The National Encyclopedic Buying Guide

70,000 Product Classifications

10,000 Pages of Informative, Accurate Purchasing Information

12,252 Advertisers in 1958 Edition

Lists all products of all manufacturers in United States

ABP

100% A. B. C. PAID "BUYERSHIP" CIRCULATION

ABC

THOMAS PUBLISHING COMPANY

461 EIGHTH AVE., NEW YORK 1, N. Y.

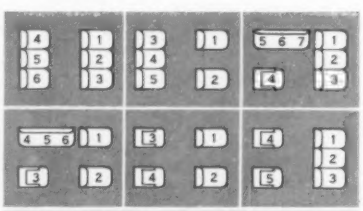
RUGGED AND RIGHT...HIGH STYLED AND HANDSOME

the Beechcraft Twin-Bonanza for '58

You get more of everything in the New Beechcraft Twin-Bonanza for '58 — more power, more speed, more comfort, more beauty, more rugged and right construction — than in any other twin-engine airplane in its field!

With a Twin-Bonanza you save three ways —in time, in money and in energy. From lower maintenance costs to higher resale value, this top performer is not only worth more when you buy it but also worth more while you keep it.

outstanding single-engine performance



your choice of comfort... six luxurious interiors — seating four to seven persons.

The six-place *Beechcraft* Twin-Bonanza
RANGE — up to 1,650 miles nonstop
SPEED — up to 240 miles per hour

Beechcraft

For information about the **Twin-Bonanza** and the finest leasing and financing plans in aviation, see your Beechcraft distributor or dealer, or write Beech Aircraft Corporation, Wichita 1, Kansas, U. S. A.

BEECHCRAFTS ARE THE AIR FLEET OF AMERICAN BUSINESS

TABLE 1—SALES—PLANNING—BLUEPRINT*—KIDDER AND COMPANY, Cambridge 38, Massachusetts

TABULATION OF PRODUCT "A" USERS Chicago, Illinois—Gary, Indiana Industrial Areas

(1) S.I.C. No. No. of Wkrs.	(2) PRODUCT MANUFACTURED Name, Address of Plant Name, Title of Plant Official	(3) Plant Uses Product "A" For . . .	(4) Products in which "A" Used	(5) From whom Purchased	(6) Approx. Amount per Year	(7) Gripes and Comments about Product "A"
2542	**Metal Partitions, Shelving, Lockers, and Office and Store Fixtures**					
235	ABC Store Engineering Service 22 First Street Kankakee, Illinois A. J. Smith, Chief Engineer	Sealing out dust, Vibration damping	Show cases	Acme Company	$4,500	We could be interested in "A" with an adhesive back that could be quickly applied to metal parts.
3542	**Machine Tools, Metal Forming Types**					
276	BCD Rolled Thread Die Company 345 Second Street Chicago, Illinois J. B. Holden, Superintendent	Oil retaining, Sealing out dust	Thread Rolling Machine Assemblies	Consolidated Company	$22,000	We recently changed to "A" for oil retaining and would like to have various samples on hand for design work and reference.
85	DEF Machine Company 456 Third Street Gary, Indiana N. R. Warren, Treasurer	Vibration damping	Presses	Indiana Company	$3,650	Cost of mounts for larger machines is too high. Customers can't understand how "A" can cost so much and think we are profiteering. In some cases to keep good will, we have given them mounts free.
3552	**Textile Machinery**					
1152	EFG Textile Machine Company 567 Tenth Avenue Crown Point, Indiana H. R. Young, Chief Engineer	Sealing out dust, Sealing out lint	Textile Spinning, Ball Bearing Top Rolls	Consolidated Company	$17,000	Slow delivery on special sizes.
65	Johnson & Norstad, Inc. 789 Fourth Avenue Chicago, Illinois J. R. Nygren, Manager of Manufacturing	Sealing out dust	Traverse Grinding Mechanism	National Company	$165	"A" that will stand up as a friction disk might be helpful.
3811	**Engineering, Laboratory, Scientific and Research Instruments**					
120	GHI Company 123 Eighth Avenue Hammond, Indiana J. Robert Brown, Service Engineer	Sealing out dust, Vibration damping	Dial indicators	Indiana Company	$1,200	Would like more uniform and consistent quality with regard to density, porosity, weight, and thickness.
1740	Scientific Instrument Company 234 Fifth Avenue Skokie, Illinois B. V. Woodward, Assistant Chief Engineer	Sealing out light, Cushioning	Scintillation Detectors and Portable Nuclear Instruments	Consolidated Company	$45,000	In general we are very satisfied. However, colors are not always available in the thicknesses required. Dark colors are necessary for light sealing. Thickness increments are too high for special applications (e.g. we sometimes require three-thirty seconds-inch material and can purchase only one-eighth or one-sixteenth-inch, thus necessitating a sanding operation.)

All names and addresses are fictitious, but the data are drawn from an actual case history.

*The mark Sales—Planning—Blueprint is a service mark owned by Kidder and Company. Unauthorized use of mark is prohibited.

Selecting a Mailing List. There are several ways of selecting a mailing list. In some fields publications have excellent mailing lists arranged according to 4-digit S. I. C. In the metalworking field, for example, there are the *Iron Age, Steel,* and *Tooling and Production.* Here again, some of the state industrial directories listed in "SM's State Industrial Directories" (page 72) can be very helpful. You will find industrial directories for Connecticut, Delaware, Iowa, Kansas, New York which list plants according to the S. I. C. The Institute for Technical Development in Cambridge, Mass., has separate cards for thousands of manufacturing plants on which their 4-digit S. I. C. classifications are indicated. They were used in developing the S. I. C. *consumption* data for Product A.

Analyzing the Survey Returns. When the filled-in questionnaires came back, several steps were taken:

(1) First of all an acknowledgment was sent to each man who filled it in and returned it. Aside from the fact that this is just plain common courtesy, it should be kept in mind that he is probably the man on whom a salesman or agent may call, and to whom another questionnaire may be sent later on.

(2) Next, we grouped the returns from plants that indicated they are in the market for the product in question.

(3) Then we made a list giving the name, address, 4-digit S. I. C. number, and number of production workers for each plant not in the market.

This immediately gave us a list of plants on which sales calls would be wasted. At $17 to $40 per industrial sales call, it is almost as important to know where not to call as to know where to call. Also the data were available for determining S. I. C. *consumption* data Weights and Percentages, whose usefulness is indicated below.

(4) The questionnaires from plants in the market were arranged according to 4-digit S. I. C. and then sorted according to sales territory. You will note that the part of page one of a Sales - Planning - Blueprint shown in Table 1 covers Chicago, Illinois-Gary, Indiana, industrial areas. This is because one of the sales territories of the manufacturing company for whom the Blueprint was prepared covers those areas. Another Blueprint was prepared for the Philadelphia, Pa.-Camden, New Jersey, areas, etc.

(5) The questions from the questionnaire form the column headings on the Sales-Planning-Blueprints. The information in the body of the Blueprints was transcribed from the returned questionnaires.

You now have S. I. C. *consumption* data in their most detailed and useful form. Not only will this assist you in telling your salesmen where to call, when to call, on whom to call, and the best sales approach to use, but it also forms the basic S. I. C. *consumption* data needed for setting up sales territories and yardsticks for area potentials, and for determining product specifications, media selection, and channels of distribution.

Sales - Planning - Blueprints giving valuable detailed S. I. C. *consumption* data are not limited to industrial components by any means. Several have been prepared for manufacturers of light and heavy industrial equipment (from optical inspection equipment to so-called elephant machine tools) and for completely new products. In the case of the American Dynamics Corporation Hykinator, there was no question about whether or not the plant was using Hykinators, since they had not yet appeared on the market. Rather, the S. I. C. *consumption* data in the Sales-Planning-Blueprint indicated the answers to several questions about each manufacturing plant's liquid handling problems. Armed with the answers to these questions, the market engineers working with American Dynamics could determine the extent to which each plant was in the Hykinator market and the specification called for.

The S. I. C. *consumption* data in Sales-Planning-Blueprints are not exclusively the product of direct mail surveys. Even in the case of a widely known and used component like Product A a combination of direct interview and direct mail techniques was used. Frequently these are coupled with some telephone interviewing.

QUANTITATIVE S.I.C. CONSUMPTION DATA AND HOW TO USE IT

So far we have determined how to get detailed, qualitative S. I. C. *consumption* data; next we shall consider more quantitative S. I. C. *consumption* data. There are three important statistical indicators here:

(1) The industries having use for your product (called *S. I. C. effective industries*).

(2) The proportion of plants within *each* industry that have use for the product (called *S. I. C. percentage*).

(3) The relative value of each S. I. C. as a proportion of the total market (called *S. I. C. weight*).

For example, Sales-Planning-Blueprints were prepared for a manufacturer analyzing the market for his optical instrument. Market analysis found that S. I. C. 3583 (sewing machine industry) was one of the effective industries since 60% of the plants in this classification had inspection problems best solved through the use of his product. However, this 60% of the sewing machine industry plants (S. I. C. percentage) represented only 0.2% of the total market (S. I. C. weight).

You will remember that the first step in translating S. I. C. production data to S. I. C. *consumption* data was to determine the 4-digit S. I. C. categories in your market. Once you have done this, you have the S. I. C. effective industries.

You also will remember that the complete Sales-Planning-Blueprint includes not only the kind of information shown in Table 1 but also a list of manufacturing plants, in the S. I. C. effective industries, that are not in your market. For each of these plants you have the name and address, the 4-digit S. I. C. number under which it is classified and the number of production workers.

With this complete S. I. C. *consumption* data, once you have determined the validity of your sample, you can easily compute the percentage of plants within each industry that are in your market. This is the S. I. C. percentage and is quantitative S. I. C. *consumption* data. S. I. C. percentages can be applied to the S. I. C. statistics in the SALES MANAGEMENT *Survey of Industrial Buying Power* or County Business Patterns to translate them into S. I. C. *consumption* data for your product. For example: the optical instrument referred to above has an S. I. C. percentage of 60% for category 3583. If the Census of Manufactures reports there are 50 plants in S. I. C. 3583 in a certain state, the S. I. C. *consumption* data would indicate that 30 plants in S. I. C. 3583 in that state are in the market for the optical instrument.

Despite the fact that plant size, regional buying habits, and many other factors would be taken into consideration by the experienced market engineer before finally concluding that these 30 plants are in the market, the S. I. C. *consumption* data admittedly give a much better picture of the mar-

SPECIAL NOTICE TO ADVERTISERS
about a major selling opportunity

DURING JULY, 1958

$60,000,000 ready cash in Retroactive Pay

WILL BE PAID TO

Washington, D. C. Area Government Workers

Annual wage increase amounts to $106,000,000

Sixty million dollars in extra buying power, or $300 per person for 200,000 government employees, will be waiting for you in July in Washington, D.C.

This provides a unique selling opportunity for advertisers, and calls for greatly expanded newspaper schedules in the Nation's Capital.

The annual pay increase amounts to $106,000,000, more than $525 per person per year. This follows recent separate pay increases for postal employees, military people, civil service retirees and government labor and mechanical employees living in Washington. This is a vast sum of ready spending power added to the Washington Metropolitan Area's already huge $4,500,000,000 annual net buying income.

Make sure you share this unprecedented prosperity by expanding your Washington newspaper schedules now.

The Washington Star • The Washington Post and Times Herald • Washington Daily News

ket than the S. I. C. production data.

Determining S. I. C. weight from the Sales-Planning-Blueprint involves not only using the information on plants in and not in the market, but also weighing them according to annual purchases, shown in column 1. This technique gives you a very precise measurement of the S. I. C. weight. This is essential for determining the share of the market your salesmen are getting in each of your sales territories.

There is a technique for roughly gauging S. I. C. weight without resorting to a survey. With this technique, although you get none of the individual plant information shown in the Sales-Planning-Blueprint, and have no way of determining S. I. C. percentages, you do get some S. I. C. *consumption* data with only a slight expenditure of time, effort, or money.

The technique consists of having someone familiar with the application of your product assume that there is a 500-production worker plant in each of the S. I. C. effective industries and make an informed guess as to the market represented by each of these 500-man plants. To the one with the lowest "guesstimated" market potential you assign the value 1. Other S. I. C. effective industries are weight 1½, 2, 3, etc., according to the relative size of their "guesstimated" potential compared with the lowest.

Example of statistical area market potential analysis for Product X, for Cook County, Illinois

(1)	(2)	(3)		(4)	(5)
S.I.C.	Industry	Employment	% of U.S.A. S.I.C. Total	S.I.C. Weights	Weighted Proportion S.I.C.
3713	Truck & Bus Bodies	4,100	17.45%	0.5	8.725
3716	Automotive Trailers	700	4.83%	1.0	4.830
3717	Motor Vehicles & Parts	29,800	4.58%	7.0	32.060
etc.	etc.	etc.	etc.	etc.	etc.
			Assume	96	587.643

Area Market Potential for Cook County $\frac{587.643}{96} = 6.1\%$

Note: Figures are dummies for illustrative purposes only. For detailed discussion of this method as applied to an actual case (establishing the market potential for precision internal grinding machines) see "Market Potentials In The Machine Tool Industry," Journal of Marketing, July 1954, by F. E. Hummel.

Area Market Potential Analysis

S. I. C. weights can be used in area market potential analysis.

There are a number of ways of estimating the market potential by area for individual products. We outline below *one* approach to this problem. See Table 2 for hypothetical calculations.

(1) **Major Market Areas.** The first step is to break down your company's total market into small geographical areas (state, county, metropolitan area) for individual analysis. In our hypothetical example in Table 2, assume Cook County is one of these areas.

(2) **S. I. C. Effective Industries.** Next, for each area list the S. I. C. effective industries. Note that each S. I. C. effective industry should be listed even though some areas may have no plants or employment for some of the industries.

(3) **Statistical Series.** Select an appropriate statistical series to measure each industry's buying potential. For example, you can select from the *Survey of Industrial Buying Power* the employment statistics for each 4-digit industry by counties. The proportion of workers found in a county must be determined as a percentage of the total U. S. employment for each industry. For example, let us assume Cook County has 29,800 employees in S. I. C. 3717, and that the total U. S. employment is 650,800. Cook County then has 4.58% of the nation's employment in this industry.

Often the question is raised as to the merits of using a single or multiple index. A single index uses one set of data (example: employment statistics) weighted by industry importance while a multiple index combines two or more series of data (example: employment plus sales) weighted by industries. The decision must be determined for each case depending upon the series available and the characteristics of the product and market under study.

For a single index, the common practice is to use employment as the statistical series of data on the theory that industrial purchases within an industry vary approximately in relation to the size of the companies as measured by the number of workers they employ.

(4) **S. I. C. Weight.** Weights must be attached to the various industries constituting markets. Such weights must be established for each industry in order to consider properly the differences in product usage by the various industries. They are national weights for S. I. Cs. and will be the same for each area.

(5) **Calculation.** The final step is to calculate the market potential index. The proportion of U. S. workers for each S. I. C. (column 3) is multiplied by the weights for each industry (column 4). The resultant factor we call the weighted proportion S. I. C. (column 5). The summation of all S. I. C. industries of this weighted proportion (column 5) divided by the sum of the total weights for all industries in your market (column 4) indicates the S. I. C. *consumption* data market potential for this particular geographical locality.

In our hypothetical example, we conclude that Cook County represents approximately 6.1% of our total market for the product under study.

Sales Territory Determination

S. I. C. *consumption* data are particularly helpful in solving many of the problems related to the determination of sales territories. The exact delineation of sales territories, and the determination of the number of salesmen needed, are a function of several interrelated factors, such as the number of customers, the area market potential, the number and frequency of calls to be made, transportation facilities, and topography.

For example, one metal working company located each its district sales offices in the heart of a market concentration. The number of 4-digit plants in the market were plotted on a county outline map, and immediately the area of large market concentration appeared.

In addition, area market potential figures were calculated for every industrial county in the United States. It was found that over 80% of the potential market was concentrated in only ten states. The company's policy is to have direct representatives cover the area of highest market potential, and to utilize agents in areas of small market potential and big distances to

travel. The study pointed out new areas of sufficiently large and concentrated market potential to justify a change from agents to direct representatives.

To determine the number of salesmen needed, each S. I. C. effective industry was classified into one of three groups: (1) those the salesmen should call on monthly; (2) those, bi-monthly; (3) those, bi-annually. Thus each industrial area was analyzed by S. I. C. and size of plant, and classified as above so that for each area in the country the number of customers and approximate frequency of sales calls were known. These data were then used to aid in determining the size of the territory and the number of salesmen needed to cover it.

In addition, the area market potential figures for each sales territory provided one method for checking the effectiveness of the company's salesmen and agents. Periodically marketing management compares the proportion of sales in each territory against the market potential for that territory to establish a relative measure of sales effectiveness.

Advertising

The main job of industrial advertising is to get the advertising message into prospect plants and to the right men.

S. I. C. *consumption* data can be used to single out these plants and provides clues as to how many of the plants are reached by various advertising media. Also, advertising, working closely with sales analysis, can use the data to determine the problems at which the advertising copy should be aimed.

An analysis of how the S. I. C. Weights and Percentages of your company's products can be used to select business magazines for industrial advertising is presented in detail in the Kidder article, "The Cost Effectiveness Approach to Industrial Space Buying," in the April, 1955, *Journal of Marketing*.

In broad outline, the advertising and marketing research department obtained from each magazine a statement of its circulation according to the number of plants reached in each 4-digit S. I. C. They then compared their S. I. C. percentages and weights with those of the magazines, and gave the highest rating to the magazine with the most favorable comparison. The crucial determinant is the cost per plant of getting your message into the prospect plants, although of course strong consideration must also be given to editorial content, impact, analysis, inquiry analysis, leadership and similar factors.

WHERE DO HIS DECISIONS COUNT THE MOST?

Each year an untold number of expensive man hours are lost when executives are transferred to new locations.

They find themselves tied *down* with moving details just when they should be stepping *up* to their new responsibilities.

United Van Lines "Pre-Planned" service eliminates costly lost time by handling *all* the details for the family that's moving. From old home to new, every step is planned and followed through by the United Agent. And only United Agents provide the added safeguard of Sanitized vans and equipment, your assurance of the cleanest possible move.

For convenient, time-saving "Pre-Planned," Sanitized moving service, call the nearest United Van Lines' Agent. He's listed under "MOVERS" in the Yellow Pages.

United Van Lines

MOVING WITH CARE . . . EVERYWHERE®

you have in your hands

1/119ths of a publisher's service

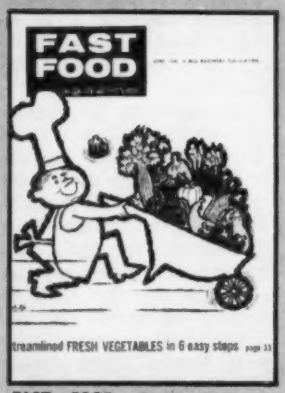
to business and industry

In magazine publishing every "new issue" is in reality a "new product." Bill Brothers Publications, with 9 magazines in 9 different fields, turns out 119 completely different, brand new products each year . . . including, of course, this great issue—*Sales Management*'s July 10 Survey of Industrial Buying Power.

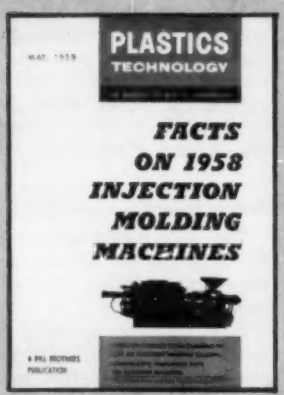
The fields served by Bill Brothers Publications are vital, volatile, highly specialized fields with highly specialized informational needs. The Bill Brothers Publications do a better than average job of serving these needs, editorially.

Many important advertisers have faith in these fields and recognize Bill Brothers Publications as effective ways to communicate with the important specifiers and buyers. They back this faith with their advertising dollars.

If you are with one of those companies busily cutting expenses in anticipation of a prolonged recession, or with an agency having trouble with client pessimism, we recommend to you a recent talk made by the publisher of *Sales Management*, Phil Salisbury, before the Eastern t.f. Club. It does a better demolition job on the prophets of doom and the exponents of gloom than anything we've seen in some time. Sample: "Never have I known of a company that was able to economize itself into a profit." Copies of this talk, "Business is what you make it," are available from Bill Brothers Publications.

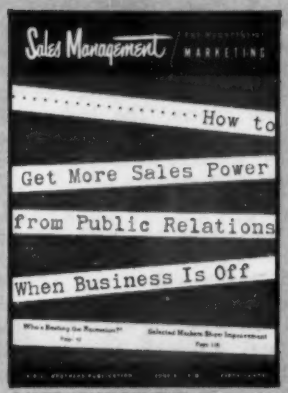


FAST FOOD — Reaches 50,000 restaurant operators who are primarily concerned with serving food faster and cooking it quicker. These outlets are the counter restaurants, coffee shops, diners, drive-ins and cafeterias.



PLASTICS TECHNOLOGY — Provides concentrated coverage of the engineering and processing technologists whose influence bears so importantly on the specification and purchase of the materials, equipment, and services used in all segments of the industry.

FLOOR COVERING PROFITS — Serves the retailers of floor coverings and allied products; helping them sell more efficiently and profitably through better merchandising.



SALES MANAGEMENT—The only business publication in America devoted exclusively to the interests of the nation's sales executives and other sales-minded top-management executives.

TIDE—The Advertising Magazine for Executives, serves a broad management group with its new interest in advertising, as well as those executives with line responsibility in advertising.

TIRES TBA—MERCHANDISING—The merchandising publication serving independent tire dealers-retreaders, automotive wholesalers of tires, batteries and accessories and independent oil jobbers with TBA programs.

RUBBER WORLD—Serves the rubber industry; the technical production executives among the manufacturers of tires, tubes, mechanical rubber goods, footwear, reclaimed rubber, plastics, chemicals, machinery, equipment, and synthetic rubber products.

PREMIUM PRACTICE—The Magazine of Incentive Merchandising; specifically edited for those executives in a wide variety of industries who buy and use incentives as a definite part of their sales programs.

SALES MEETINGS—Caters exclusively to the sales executives' interest in effective sales meetings, conventions, trade shows and exhibits. Supplementary distribution to association executives, exhibit and show managers.

Bill Brothers Publications

386 Fourth Avenue
New York 16, New York

●

in Industry

Plastics Technology
Rubber World

●

in Marketing

Premium Practice
Sales Management
Sales Meetings
Tide

●

in Merchandising

Fast Food
Floor Covering Profits
Tires TBA—Merchandising

●

Each Bill Brothers Publication is a member of one or more of the following:

ABC • BPA • NBP

ABP • MPA

●

BILL BROTHERS
B
PUBLICATIONS

With direct mailing lists the problem is much simpler since many mailing list houses classify their lists according to the 4-digit S. I. C. You select for your purpose those S. I. Cs. with both the highest percentages and heaviest weights.

Bryant Chucking Grinder Company's program for internal grinding machines is a pertinent example of the use of S. I. C. in industrial advertising. In determining the advertising program, the S. I. C. system was used extensively. Marketing research helped map the ground plan for the advertising campaign by indicating that the market for internal grinding machines was heavily concentrated in three 4-digit S. I. Cs. Examples of problems solved through the use of the machine, furnished by sales analysis for use in the advertising copy, were selected from the three S. I. C. industries. Magazines offering the best coverage of these three industries were chosen. Finally, the message was carried by direct mail to plants in the three industries.

In the case of Product A, several trade magazines were compared for market coverage among selected S. I. Cs. The cost per plant for reaching the market for Product A was found to vary from less than a dollar for some magazines to over eleven dollars for others. The higher-cost magazines were eliminated from the advertising schedule while three of the lower-cost ones were added.

The Advertising Message. S. I. C. *consumption* data from the Sales-Planning-Blueprint can be of great help in planning the advertising message. In Table 1, columns 3, 4, and 7 give you applications for your product, end products in which your product is used, and gripes and comments by users of your kind of product. All of the plants in the textile machinery industry mention "sealing out dust" as an application. This provides a clue to advertising copy that would be of interest to the readers of a publication covering that industry. Both plants in the scientific instrument industry have gripes about the thickness of Product A they are receiving from your competitors. If you have a good story about thickness quality control you will want to advertise it.

Trade Channels

The basic policy decision concerning the selection of the correct trade channels—whether for direct sales or distributor or agent—can be formulated only after careful analysis of many factors, such as the nature of the product, the market, the competition and the company organization.

S. I. C. *consumption* data, particularly S. I. C. weights and percentages can be of great help in determining the number of plants to be called on in each territory and the dollar volume of sales to be expected. One company assigns its own salesmen to areas with high dollar sales potentials and relatively few calls to be made. In terms of S. I. C. *consumption* data these would be areas in which the S. I. C. effective industries would be characterized by high S. I. C. weights and percentages, with relatively few plants. On the other hand, this company uses industrial distributors in areas in which there are low dollar potentials and many plants to be called on.

Incidentally, this company got an increased share of the market in both direct sales and distributor sales areas following the introduction of Sales-Planning-Blueprints, with the greatest percentage increase in distributor sales areas. The reason for this is that provided with detailed S. I. C. *consumption* data on an individual plant basis, the distributor salesmen began spending relatively more time calling on prospects for the company's product.

MIDWEST MANUFACTURING
MIDWEST MANUFACTURING
MIDWEST MANUFACTURING

The only publication concentrating the purchasing power of the largest 9,000 Midwest *metal product manufacturers* into just ONE READERSHIP!

Impact coverage in the six basic metal-working fields (SIC 33, 34, 35, 36, 37, 38). 5,920 plant owners and presidents . . . and 7,137 purchasing, engineering and production execs!

All located in the area-of-influence of your Chicago office!

Write for brochure

midwest Manufacturing

330 Harrison St., Oak Park, Illinois

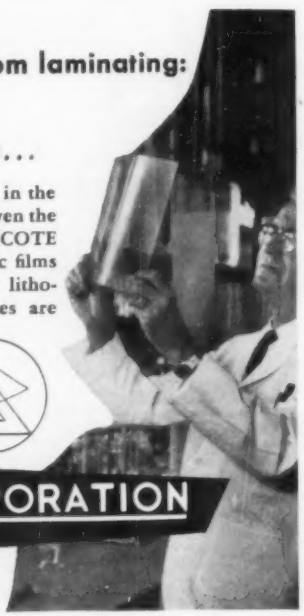
THE PURCHASING GUIDE FOR TOOLS IN THE MIDWEST

LAMCOTE* custom laminating:

a service to the printing and binding industries...

Twenty years of successful experience in the lamination of printed material has proven the superiority of Arvey's *exclusive* LAMCOTE process . . . with scuff-resistant plastic films on lithographed book cloth, and all lithographed paper stocks. Your inquiries are cordially invited.

*LAMCOTE is not a spray or liquid—but a tough, lustrous film of plastic applied by an exclusive patented process. LAMCOTE is a registered trademark of Arvey Corporation, Chicago.



ARVEY CORPORATION
Since 1905

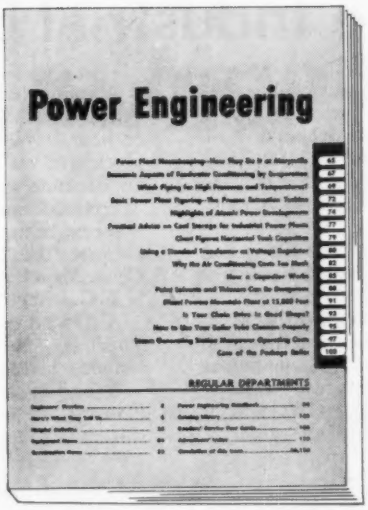
3500 N. Kimball Ave., Chicago 18, Ill.
300 Communipaw Ave., Jersey City 4

Are you looking for Market Information on any of the power field products or services in this list?

- ☐ Diesel Engines and Gas Turbines
- ☐ Steam Turbines and Engines
- ☐ Condensers Cooling Towers, and Heat Transfer Equipment
- ☐ Electrical Equipment and Distribution
- ☐ Lubricants, Lubrication Equipment
- ☐ Refrigeration and Air Conditioning
- ☐ Pumps, Compressors and Accessories
- ☐ Construction Materials
- ☐ Maintenance and Repair Equipment and Supplies
- ☐ Mechanical Power Transmission
- ☐ Fire Prevention, Safety Equipment
- ☐ Instruments and Controls
- ☐ Boilers and Accessories
- ☐ Fuels
- ☐ Firing Equipment
- ☐ Coal and Ash Handling
- ☐ Fans and Dust Collectors
- ☐ Hydroelectric Power
- ☐ Water Treatment, Waste Disposal
- ☐ Piping, Valves and Fittings
- ☐ Atomic Energy

Consult PE Research Department

We will gladly help you with your market analysis. Our research Department has valuable field facts on a variety of products. For specific data on your product, write or phone our representative nearest you, listed below.



Use POWER ENGINEERING to sell power equipment and supplies

It will present your power sales messages more effectively than any other magazine, because:

1. **It covers the specific job problems of engineers who control power equipment purchases.**
2. **The editorial services embrace: Power generation, transmission, distribution and utilization in: Public and private utility plants; Manufacturing Industries and Mining; Service establishments such as buildings, power laundries, hotels, hospitals, etc. Power services include: steam, electricity, compressed air, refrigeration, gas, hot and cold water.**
3. **It concentrates exclusively and specifically on the power engineering function without straddling other fringe engineering interests and consequently reaches more power using units and readers than any other publication.**

1957 Editorial Breakdown by Subjects

	Percent
Complete Installation Articles and Power Plant Design	10.30
Diesel Engines and Gas Turbines	3.60
Steam Turbines and Engines, Condensers and Heat Exchangers, Cooling Towers	6.90
Electrical Transmission and Distribution, Motors and Generators	10.30
Lubricants and Lubrication	1.35
Refrigeration and Air Conditioning	4.60
Pumps and Compressors	3.38
Management, Training, Procedures and Methods	8.50
Construction, Maintenance and Repair, Mechanical Power Transmission, Fire Prevention and Safety	5.82
Instruments, Controls, Regulators, Records, Costs	11.60
Boilers and Accessories	6.90
Fuels & Firing Equipment, Coal & Ash Handling, Fans & Dust Collectors	5.10
Steam Accessories	2.20
Hydroelectric Power	0.81
Water Treatment and Waste Disposal	5.82
Piping and Valves	3.20
Atomic Energy	7.72
Fundamentals of Steam, Electricity, Gases, Heat Transfer	1.90
TOTAL	100.00

1957 Power Engineering Circulation

S.I.C. Two-Digit Listing of Circulation and Plant Units Reached

	Circ.	Plants
Mining	1,108	882
Food and Kindred Products	2,956	2,518
Textile Mill Products and Apparel	1,440	1,199
Lumber, Wood, Furniture, Fixtures	891	788
Paper and Allied Products	1,650	1,000
Chemicals and Allied Products	2,008	1,266
Products of Petroleum and Coal	1,065	624
Rubber, Leather & Leather Products	598	457
Stone, Clay and Glass Products	651	523
Primary Metal Industries	2,294	1,325
Fabricated Metal Products	1,638	1,324
Machinery	1,670	1,223
Electrical Mach'y, Equip. & Supplies	812	569
Transportation Equipment	951	586
Misc. Manufacturing Industries	856	690
Transportation, Warehousing, Communication	1,172	958
Heat, Light, Power, Water & Sanitary Services	8,768	6,063
Retail Trade, Office & Mfg. Bldgs.	716	663
Hotels	2,271	2,262
Laundries, Dry Cleaners, Amusement	1,088	1,076
Hospitals, Medical & Health Services	3,435	3,306
Educational Services	1,106	1,011
Engineering and Construction	1,884	1,195
Not analyzed by plant units: Government, Sales and Distribution	613	
TOTAL	41,641	31,508

READEX available in POWER ENGINEERING

Every month READEX surveys a cross-section of POWER ENGINEERING readers to learn directly from them what advertisements and editorial items were of special interest to them.

Through our monthly READEX reports you will get information to help you design advertising for conscious reading. It will tell you what kinds of copy and layout techniques produce greater reader interest for products in general, and your advertising in particular in the power engineering field. Write for new booklet analyzing the factors which increase readership.

BPA NBP

Power Engineering

TECHNICAL PUBLISHING CO., 308 EAST JAMES ST., BARRINGTON, ILLINOIS
(Suburb of Chicago)

Publishers also of PLANT ENGINEERING

DISTRICT MANAGERS

Chicago 3, Ill.—John R. Morrison, Warren F. Saas, 110 S. Dearborn St., Dearborn 2-5453.

New York City & New England—W. H. Relyea, Jr., 1613 Graybar Bldg., New York 17, N. Y., MUrray Hill 5-3779.

Philadelphia, Pa. & New Jersey—Joseph E. Halloran 15 Sunrise Drive, Morris Plains, N. J., JEfferson 8-7873.

Pittsburgh 19, Pa.—Robert R. Anderson 404 Frick Bldg., COurt 1-4940.

Toledo, Ohio—William B. Davis

McDonald-Thompson Offices:

Los Angeles 5, Calif.—Connie J. Grabb 3727 West Sixth St., DUnkirk 7-5391.

Seattle 4, Wash.—Harry Abney 1008 Western Ave., MAin 3-3766.

San Francisco 5, Calif.—Les Meek 625 Market St., YUkon 6-0647.

Denver 2, Colo.—Robert Heidersbach 222 Colo. National Bank Bldg., KEystone 4-4669.

Houston 6, Texas—Frank Vickrey Room 214, 3217 Montrose Blvd., JAckson 9-6711.

Tulsa, Okla.—Ted R. Troutman 2010 South Utica, Riverside 3-1981.

POWER ENGINEERING reaches more power specialists per advertising dollar

SM's State Industrial Directories

The data in this list* are based upon personal inspection of every state industrial directory in the collections of the Baker Library of the Harvard Graduate School of Business Administration and the Kirstein Memorial Business Information Branch of the Boston Public Library. In some cases relatively old directories have been included as reference points for more up-to-date data.

The only regional or city directory on this list is that of Seattle, Wash., which was included only because the state directory covered all of the state except Seattle.

A unique feature of the table is the notation as to whether the directories listed use the Standard Industrial Classification (S. I. C.). This is indicated in the code figures in the "Data" line for each directory, which also indicates, under "Product Classification," how the S. I. C. is used.

The code explanation is at the bottom of the page.

It also indicates whether plant names are arranged alphabetically, with or without cross-indexing, or geographically, or both ways. Some directories, like the Colorado Manufacturers, use numbers other than S. I. C. in the product classification section. This is also shown by the code.

Products may be listed alphabetically with or without numbers being attached to the alphabetical headings. For instance, the "Register of War Production Facilities in Connecticut" arranges products according to the 2-digit S. I. C. without using S. I. C. numbers.

A few directories use unique product classifications which do not fit any of the above categories. They are included in "Other" (code 10 below).

Since this is the first attempt to present a list of state industrial directories indicating S. I. C. usage, the authors will appreciate your comments and suggestions.

ALABAMA

Industrial Alabama, 1955
Data: 8,11,12,14,16,17,19,20
Industrial Div., Ala. C. of C.
468 South Perry Street,
Montgomery, 1. (252 pgs.; $5.00)

The Alabama Book, 1948
Data: 8,19
Directories Publishing Corp.
First National Building
Birmingham 3. (471 pgs.; $10.00)

ARIZONA

Ariz. Dir. of Manufacturers, 1956
Data: 8,11,12,16,19
Unemployment Comp. Div.,
Employment Security Commission
Phoenix. (68 pgs.)

Ariz. Industrial Buyers Guide, 1948
Data: 8,19
Phoenix Chamber of Commerce
124 North 2nd Avenue
Phoenix. (99 pgs.; $1.50)

Dir. of Ariz. Manufacturers, 1954
Data: 8,11,12,14,16,19
Valley National Bank
Phoenix. (59 pgs.)

ARKANSAS

Directory of Ark. Industries, 1955
Data: 1,5,8,11,12,15,17,19,20
Ark. Industrial Dev. Commission
State Capitol Building,
Little Rock. (94 pgs.; $3.00)

CALIFORNIA

Cal. Mfrs. Annual Register, 1958
Data: 8,11,12,13,14,15,18,19
Times-Mirror Press
110 South Broadway
Los Angeles 12. (900 pgs.; $25.00)

Products & Related Industrial Services, 1958
Data: 8,19
Reprinted from 1958 Edition,
Calif. Mfrs. Annual Register
Times-Mirror Press, 110 S. Broadway
Los Angeles 12 (163 pgs.; $7.50)

COLORADO

Dir. of Colorado Manufacturers, 1948
Data: 1,2,6,15,19
Colorado Resources Dev. Council
301 Kittredge Building,
Denver 2, (50 pgs.; $5.00)

CONNECTICUT

Connecticut Purchasing Guide, 1956
Data: 8,15,20
Conn. Development Commission
Trade Promotion Div.,
Hartford 15. (114 pgs.; $2.00)

Directors Register of Conn., 1957
Data: 8,11,12,14,15,20
Directors Register of Conn. Co.
248 Meadow Street
New Haven. (91 pgs.; $50.00)

Directory of Conn. Manufacturing & Mechanical Establishments, 1957
Data: 1,3,11,17
Bureau of Labor Statistics
Connecticut Labor Dept.
92 Farmington Ave.
Hartford 15. (172 pgs.; 50¢)

Register of War Production Facilities in Connecticut, 1952
Data: 1,2,8,11,15,19,20
Conn. Dev. Comm., State Office Bldg.
Hartford 15. (346 pgs.)

Industrial Directory of Conn., 1947
Data: 1,3,7,9,16,18,19,20
Labor Dept., State of Conn.
92 Farmington Ave.
Hartford 15. (620 pgs.; $5.00)

It's Made in Connecticut
Data: 8,19
928 Farmington Ave.
West Hartford. (10 pgs.; $2.50 yr., 25¢ per mo.)

DELAWARE

Directory of Manufacturers, State of Delaware, Jan. 1957
Data: 7,11,12,15,17,19
Del. State Chamber of Comm. Inc.
1112-14 King Street
Wilmington 1. (66 pgs.; $5.00)

Industrial Directory of Del., 1947
Data: 1,2,8,14,19
Labor Commission of Delaware
408 West 9th Street
Wilmington 43.

FLORIDA

Dir. of Fla. Industries, 1956-57
Data: 1,4,8,11,12,14,16,17,19,20
Fla. State Chamber of Commerce
8057 Expressway (Arlington) P.O. Box 8046
Jacksonville 11. (331 pgs.; $5.00)

GEORGIA

Georgia Manufacturers, 1955
Data: 8,11,17,19
Georgia Department of Commerce
100 State Capitol
Atlanta 3. (332 pgs.; $3.00)

World Trade Dir. of Georgia, 1955
Data: 15
World Trade Council
Atlanta C. of C., Volunteer Bldg.
Atlanta 3. (99 pgs.; Free)

IDAHO

Idaho Industrial Directory, 1954-55
Data: 8,12,17,20
Idaho State Chamber of Commerce
524 Idaho Building
Boise. (50 pgs.; $2.50)

*Compiled by Maurice J. Reuttar, Research Associate, and Nathaniel R. Kidder, President, Kidder and Company.

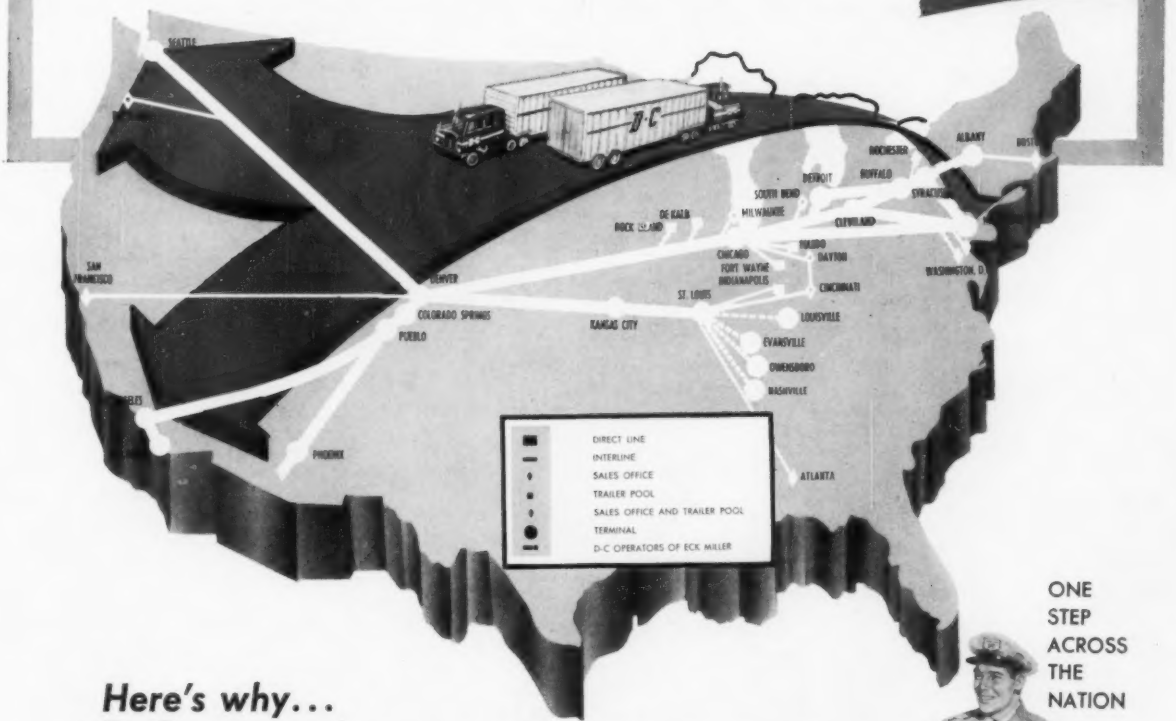
Data Code: 1. Uses S.I.C.; 2. 2-Digit S.I.C.; 3. 3-Digit S.I.C.; 4. 4-Digit S.I.C.; 5. 4-Digit S.I.C. & Product Name; 6. Product Classification Numbers other than S.I.C.; 7. Product Classification Alphabetically with Numbers; 8. Product Classification Alphabetically no Numbers; 9. S.I.C. Sequence no Numbers; 10. Other; 11. Number Employes; 12. Name of Official; 13. Capitalization; 14. Trade & Brand Names; 15. Alphabetical Listing; 16. Alphabetical Cross-Indexing; 17. Geographical Listing; 18. Geographical Cross-Indexing; 19. Product Classification Listed; 20. Product Classification Cross-Indexed.

COAST TO COAST

Sales Managers

are specifying D-C's direct service

COAST TO COAST



Here's why...

- **D-C is FASTER**—One-carrier direct service from coast-to-coast. 2-man sleeper cabs go straight-thru with no transloading—cuts 20% off running time.
- **D-C is SAFER**—One-carrier responsibility from pickup to delivery assures safe arrival, speeds tracing.
- **D-C is MORE DEPENDABLE**—One carrier control means experienced personnel, modern equipment and facilities *all the way.*

TERMINAL CITIES

Albany, New York...UN. 9-8416	Los Angeles, Cal.....AN. 1-0241
Buffalo, New York.....RE. 3910	†Nashville, Tenn.....CH. 2-5284
Chicago, Illinois.....LA. 3-7440	New York, New York.LO. 4-3320
Cleveland, Ohio.....SH. 9-1666	(N. Bergen, N. J.)..UN. 3-0900
Colo. Springs, Colo...ME. 2-1486	†Owensboro, Kentucky MU. 3-5363
Denver, Colorado....DU. 8-4567	Phoenix, Arizona.....AL. 8-5321
Detroit, Michigan.....VI. 3-9505	Pueblo, Colorado.....LI. 3-4425
†Evansville, Indiana....HA. 3-6487	†St. Louis, Missouri....CH. 1-7830
Kansas City, Mo.....HU. 3-9343	Seattle, Washington..MA. 4-3850
†Louisville, Ky.....ME. 6-1361	Syracuse, New York..GR. 1-4103

†DC operators of Eck Miller—Terminal Cities

OFF-LINE SALES OFFICES:

Atlanta	**Indianapolis	**Rock Island, Ill.
Boston	*Milwaukee	San Francisco
**Cincinnati	Philadelphia	South Bend, Ind.
*Dayton	*Portland, Ore.	**Toledo
**DeKalb, Ill.	Rochester, N.Y.	Washington, D. C.
**Ft. Wayne		

*With Trailer Pool **Trailer Pool Only

ONE STEP ACROSS THE NATION

Get new customers—keep them satisfied—with **D-C** ***the coast-to-coast choice for coast-to-coast service!***

D-C Denver Chicago Trucking Co., Inc.

THE ***ONLY***

COAST-TO-COAST CARRIER

ILLINOIS

Directory of Industries, 1947
Data: 15,17
Illinois Terminal Railroad Co.
2015 Clear Lake Avenue
Springfield. (136 pgs.; Free)

Illinois Manufacturers Dir., 1958
Data: 8,11,12,13,16,17,19
Manufacturers News, Inc.,
20 East Huron Street
Chicago 11. (1,669 pgs.; $25.00)

INDIANA

Indiana Industrial Dir., 1958-59
Data: 8,11,12,14,17,20
Indiana State Chamber of Commerce
Board of Trade Building
Indianapolis 4. (277 pgs.; $12.00)

IOWA

Dir. of Iowa Manufacturers, 1955
Data: 1,4,8,11,15,17,19,20
Iowa Development Commission
Central National Bank Building
Des Moines 9. (275 pgs.; $5.00)

Iowa Firms with 25 or More Employees, 1951
Data: 11,17
Iowa State Bureau of Labor
Des Moines. (26 pgs.)

KANSAS

Dir. of Kan. Manufacturers, 1956-57
Data: 1,5,8,9,11,15,17,19,20
Kansas Industrial Dev. Commission
1025 Kansas Avenue
Topeka. (203 pgs.; Free)

KENTUCKY

Kentucky Industrial Dir., 1955-56
Data: 1,4,8,9,11,16,17,18,19,20
Agricultural & Industrial Dev. Board,
Commonwealth of Ky., Frankfort, &
Ky. C. of C., 317 Fincastle Bldg.
Louisville 2. (398 pgs.; $5.50)

LOUISIANA

La. Dir. of Manufacturers, 1957
Data: 6,7,11,12,14,15,17,19
La. Dept. of Commerce and Industry
Box 4186, Capital Station
Baton Rouge 4. (240 pgs.; $2.50)

MAINE

Buyer's Dir. of Maine Industries & the Products They Make, 1956-57
Data: 8,11,15,18,20
Jointly by Dept. of Labor & Ind., and
Dept. of Dev. of Ind. & Comm.
State House
Augusta. (190 pgs.; Free)

A Dir. of Maine Manufacturers, 1956
Data: 1,3,9,11,17,20
Dept. of Labor and Industry
Div. of Research and Statistics
State House
Augusta. (77 pgs.; Free)

Maine Register, 1957-58
Data: 8,11,12,15,18,20
Fred L. Tower Companies
335 Forest Avenue
Portland 5. (1,379 pgs., $20.00)

MARYLAND

Dir. of Md. Manufacturers, 1956
Data: 11,17
State of Md. Dept. of Labor & Ind.
12 East Mulberry Street
Baltimore 2. (72 pgs.; $2.00)

MASSACHUSETTS

Buyers' Guide of Mass. Mfrs. 1956
Data: 1,5,11,19,20
Div. of Research, Mass. Dept. of Comm.
Boylston Street
Boston. (399 pgs.; 90¢)

Classified Business Dir., State of Mass. 1956
Data: 8,19
Classified Bus. Publications Co.
11 Beacon Street
Boston 8. (161 pgs.)

Dir. of Mfg. in Mass. (Employing 8 or more Production Workers) 1957
Data: 11,16,17
Div. of Research, Dept. of Comm.
Secty. of the Commonwealth, State House
Boston 33. (250 pgs.; 90¢)

A Dir. of Mass. Mfgers. (Employing 50 or More Production Workers) 1951
Data: 1,3,11,17,20
Div. of Statistics, Mass. Dept. of Labor
and Industries, 88 Broad Street
Boston. (66 pgs.; Free)

MICHIGAN

Directory of Mich. Mfrs., 1957
Data: 8,11,12,16,17,20
Manufacturer Publishing Co.
8543 Puritan Avenue
Detroit 38. (504 pgs.; $22.00)

MINNESOTA

Minn. Dir. of Manufacturers, 1957
Data: 1,4,8,11,12,19,20
Minn. Dept. of Bus. Development
State Office Bldg., St. Paul 1.
Distributed by Documents Sec.,
Dept. of Admin., 115 State Capitol
St. Paul 1. (159 pgs.; $5.00)

MISSISSIPPI

Dir. of Miss. Manufacturers, 1953
Data: 1,4,8,11,16,17,19,20
Miss. Agricultural & Industrial Board
State Office Building
Jackson. (93 pgs.; $1.50)

MISSOURI

Missouri Dir. of Mfgers., 1954
Data: 1,5,7,15,19,20
Mo. Div. of Resources and Develop.
Jefferson Building
Jefferson City. (212 pgs.; $10.00)

MONTANA

Industrial Survey and Directory of Manufacturers of Montana, 1955-56
Data: 8,11,12,19
Montana C. of C., P.O. Box 1730
Helena. (56 pgs.; $1.00)

NEBRASKA

Dir. of Nebraska Mfgers., 1955
Data: 1,3,8,11,12,14,16,19,20
Div. of Nebraska Resources
1107 Capitol Building
Lincoln 9. (99 pgs.; $1.00)

NEVADA

List of Nev. Mfgrs and Pop. Centers with Basic Economic Data, 1955
Data: 17
Dept. of Economic Dev., State of Nev.
Carson City. (26 pgs.)

NEW HAMPSHIRE

Made in New Hampshire, A Directory of Manufactured Products, 1957
Data: 8,11,12,15,17,19
N H. Planning & Dev. Commission
Concord. (104 pgs.; $1.00)

New Hampshire Register, 1957
Data: 8,12,15,18,20
Fred L. Tower Companies
335 Forest Avenue
Portland 5, Me. (746 pgs.)

30th Biennial Report of Dept. of Labor for Fiscal Periods Ending 6/30/54
Data: 8,11,19
State of N.H., Dept. of Labor
Concord. (111 pgs.; Free)

NEW JERSEY

N. J. Industrial Dir., 1956-57
Data: 1,5,11,12,16,17,19,20
New Jersey Industrial Dir. Co.
400-38th Street
Union City. (763 pgs.; $25.00)

NEW MEXICO

Dir. of N. M. Manufacturers, 1957
Data: 1,3,8,11,14,17,19,20
Bureau of Business Research, Univ. of
New Mex., in cooperation with N. Mex.
Economic Dev. Commission
Albuquerque. (56 pgs.. $2.00)

NEW YORK

Industrial Dir. of N.Y. State, 1953
Data: 1,5,8,11,16,17,19,20
N. Y. State Dept. of Comm.
112 State Street
Albany 7. (1,010 pgs.; $10.00)

NORTH CAROLINA

N.C. Almanac & State Ind. Guide, 1954-55
Data: 11,12,15
Almanac Pub. Co., 1610 Iredale Dr.
Raleigh. (69 pgs.; $1.65)

N.C. Dir. of Mfg. Firms, 1956
Data: 1,4,9,11,12,15,17,19,20
N. Car. Dept. of Labor
Raleigh. (518 pgs.; $5.00)

NORTH DAKOTA

N. D. Dir. of Mining & Mfg, 1956
Data: 1,11,17
Greater N. Dak. Assoc., 311 Broadway
Fargo. (18 pgs.; $1.00)

Data Code: 1. Uses S.I.C.; 2. 2-Digit S.I.C.; 3. 3-Digit S.I.C.; 4. 4-Digit S.I.C.; 5. 4-Digit S. I. C. & Product Name; 6. Product Classification Numbers other than S.I.C.; 7. Product Classification Alphabetically with Numbers; 8. Product Classification Alphabetically no Numbers; 9. S.I.C. Sequence no Numbers; 10. Other; 11. Number Employes; 12. Name of Official; 13. Capitalization; 14. Trade & Brand Names; 15. Alphabetical Listing; 16. Alphabetical Cross-Indexing; 17. Geographical Listing; 18. Geographical Cross-Indexing; 19. Product Classification Listed; 20. Product Classification Cross-Indexed.

OHIO

Dir. of Ohio Manufacturers, 1957
Data: 1,4,7,11,17,19,20
Div. of Labor Statistics, Dept. of Industrial Relations, State Office Bldg.
Columbus 15. (641 pgs.; $3.00)

OKLAHOMA

Okla. Manufacturers' Directory, 1957
Data: 8,11,16,17,20
Okla. Dept. of Comm. & Industry, State Capitol, Oklahoma City, in cooperation with Bur. of Bus. Research, Univ. of Okla.
Norman. (207 pgs.; $5.00)

OREGON

Ore. Manufacturers' Dir., 1956
Data: 1,3,8,9,11,12,15,18,19,20
Oregon Dev. Commission
741 State Office Building
Portland 1. (160 pgs.; $1.00)

State of Ore. Industrial Dir., 1952
Data: 8,11,19
Bureau of Labor, State of Oregon
State Office Building
Salem. (87 pgs.; $1.00)

PENNSYLVANIA

Industrial Dir. of the Commonwealth of Pennsylvania, 1956
Data: 1,3,8,11,17,19,20
Bureau of Statistics, Dept. of Internal Affairs, Harrisburg. Sold by Bureau of Publications, 10th & Market Sts.
Harrisburg. (992 pgs.; $7.50)

RHODE ISLAND

Defense Production Facilities in R.I., 1952
Data: 1,4,8,11,16,19,20
R. I. Dev. Council, State House
Providence. (194 pgs.)

Journal-Bulletin Almanac-R.I., 1953
Data: 8,11,12,19
Providence Journal Company
75 Fountain Street
Providence. (20 pgs.; 40¢)

New Industrial Firms Registered in R.I. (Supplement List to R.I. Dir. of Manufacturers and Non-Manufacturers Establishments, 1953, 1954, 1955
Data: 1,3,9,11,12,19
R. I. Dev. Council, State House
Providence 2. (8 pgs.)

R. I. Dir. of Manufacturers & list of Non-Manufacturing Establishments, 1953
Data: 1,3,9,11,12,16,19,20
R. I. Dev. Council, State House
Providence 2. (167 pgs.; $2.00)

SOUTH CAROLINA

Industrial Dir. of S. Car., 1957
Data: 1,3,8,9,11,17,18,19,20
S. Car. State Development Board
235 Wade Hampton State Office Bldg.
Box 927
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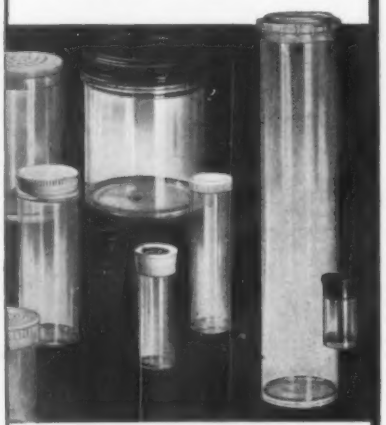

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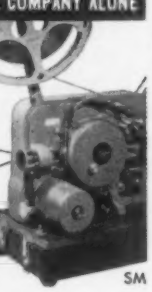

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18th Annual Report of Dept. of Labor of State of S. Car., 1953
Data: 8,11,19,20
State Office Building
Columbia. (137 pgs.)

SOUTH DAKOTA

Manufacturers' Dir. of S. D., 1956
Data: 1,5,8,11,15,17,19,20
S. Dak. Ind. Dev. & Expansion Agency
State Office Building
Pierre. (112 pgs.)

S. D. Industrial & Wholesale Dir., 1951
Data: 1,3,8,11,12,17,19
Business Research Bureau, School of Business Admin., Univ. of S. D.
Vermillion. (50 pgs.; $1.00)

TENNESSEE

Directory of Tenn. Industries, 1957-58
Data: 1,4,7,11,12,16,17,20
Tenn. Industrial & Agricultural Dev. Comm., 517 Commerce Street
Nashville 3. (302 pgs.; $5.00)

TEXAS

Directory of Texas Mfrs., 1956-58
Data: 1,4,7,11,12,17,19,20
Bureau of Business Research
University of Texas
Austin 12. (349 pgs.; $10.00)

Geographic Distribution of Some Basic Texas Industries, 1944
Data: 10,19
School of Engineering, Texas Engineering Experiment Station, AGric. & Mining College of Tex.,
College Station. (82 pgs.)

Tex. Industrial Expansion, Jan.-Mar. 1958
Data: 11,12,17
School of Engineering, Tex. Engineering Experiment Stations, Agricultural & Mining College of Texas
College Station. (33 pgs.; 25¢)

UTAH

Utah Manufacturing Directory, 1955
Data: 1,4,11,15,17,19
Utah Dept. of Employment Security & Utah Committee on Industrial & Employment Planning,
174 Social Hall Ave., P.O. Box 2100
Salt Lake City. (Free)

VERMONT

Dir. of Vt. Manufactured Products, 1957-58
Data: 1,3,9,11,12,14,15,18,19,20
Vermont Development Commission
Montpelier. (101 pgs.; Free)

Vermont Year Book, 1956
Data: 8,12,14,17,20
National Survey Company
Chester. (395 pgs.; $4.00)

VIRGINIA

Dir. of Va. Mfg. & Mining, 1957-58
Data: 1,5,7,12,15,18,19,20
Va. State Chamber of Commerce
111 N. 5th Street
Richmond. (171 pgs.; $6.00)

WASHINGTON

Dir. of Mfrs., State of Wash., 1952
Data: 1,4,7,11,15,18,19,20
Jointly by Div. of Industrial Research & Bureau of Economic and Business Research, State College of Wash.
Pullman. (91 pgs.; $3.00)

Plants in State of Wash., Not Including Seattle, 1949
Data: 17
Industrial Dept., Seattle C of C
215 Columbia Street
Seattle. (59 pgs.)

Seattle-King Co. Mfrs.' Dir., 1951
Data: 1,4,9,11,19,20
Industrial Dept., Seattle C. of C.
215 Columbia Street
Seattle. (39 pgs.; $1.00)

Selected List of Wash. Industries, 1944
Data: 11,15
Assoc. of Wash. Industries
523 White Building
Seattle 1. (23 pgs., Free)

Wash. Manufacturers—Products & Employment Listings
Data: 11,15,17
Wash. State Industry Utilization Comm.
P. O. Box 367
Olympia.

Wash. State Mfrs.' Dir., 1956
Data: 8,11,12,14,15,18,19
Wash. State Employ. Security Dept. & Wash. State Industry Utilization Committee
Olympia. (311 pgs.)

WEST VIRGINIA

Dir. of W. Va. Business & Industry, 1953
Data: 8,11,19,20
W. Va. Dept. of Labor, 643 State Office Bldg.
Charleston. (455 pgs.; $5.00)

WISCONSIN

Classified Dir. of Wisc. Mfrs., 1958
Data: 8,11,12,13,14,16,17,19,20
Wisc. Mfrs.' Assoc. 633 N. Water St.
Milwaukee 2. (927 pgs.; $14.50)

WYOMING

Dir. of Wyo. Mfrs., Mines Oil Producers, 1948
Data: 8,19
Wyo. Commerce and Industry Comm.
1110 Capitol Building
Cheyenne. (19 pgs.)

Wyo. Dir. of Mfg. & Mining, 1956
Data: 8,11,12,19,20
Wyo. Natural Resource Board,
210 Capitol Building
Cheyenne. (35 pgs.)

Wyo. State Dir. of Manufacturing and Industry, 1956
Data: 10,11,12,17,19
Wyo. Natural Resources Board
210 Capitol Building
Cheyenne. (Free)

Data Code: 1. Uses S.I.C.; 2. 2-Digit S.I.C.; 3. 3-Digit S.I.C.; 4. 4-Digit S.I.C.; 5. 4-Digit S.I.C. & Product Name; 6. Product Classification Numbers other than S.I.C.; 7. Product Classification Alphabetically with Numbers; 8. Product Classification Alphabetically no Numbers; 9. S.I.C.Sequence no Numbers; 10. Other; 11. Number Employes; 12. Name of Official; 13. Capitalization; 14. Trade & Brand Names; 15. Alphabetical Listing; 16. Alphabetical Cross-Indexing; 17. Geographical Listing; 18. Geographical Cross-Indexing; 19. Product Classification Listed; 20. Product Classification Cross-Indexed.

Industrial Market Data Sources

No single volume can come even close to presenting the wealth of data available on the industrial market for goods, materials and services. Government publications are obvious. Perhaps less obvious, but often more important, because they are likely to be more sharply angled and more up-to-date, are the studies prepared by industrial magazines.

From hundreds of surveys and studies made by publishers in this field, the editors of SALES MANAGEMENT have selected the following as being particularly helpful and available for general distribution. The list is introduced as being comprehensive, but by no means all-inclusive.

In requesting copies, please direct your inquiries to the listed publishers —not to SALES MANAGEMENT.

Aero/Space Engineering, an official publication of Institute of the Aeronautical Sciences, 2 E. 64th St., New York 21, N. Y. Two reports: "The Aero/Space Industry," third edition to be published early in September. (Copies of the second edition are still available.) It is a compilation of the plants and facilities in the U. S. engaged in original work in the research, design and final assembly phases of aircraft and missile manufacture—ranging from huge airframe and engine plants employing 30,000 to 40,000 individuals, down to small shops of less than a dozen employes. "The Engineering Professions in Aviation," an IAS vocational guidance manual which covers the engineering employment situation to provide factual information concerning job possibilities in the aviation industry for vocational guidance people in high schools and colleges. It includes data on the aviation industry; problems faced by aeronautical engineers and scientists today; engineering job classifications (aircraft manufacturing industry, Government agencies, air transport industry); engineering curricula; university wind tunnel installations.

American Artisan, 6 N. Michigan Ave., Chicago 2, Ill. Two reports: "A Market Study of Distribution Winter Conditioning & Warm Air Furnaces" presents findings of 1956-57 surveys in 14 cities selected for their conformance to the overall market as determined by the Census of Housing, Bureau of the Census. Part 1 deals with dealer activities; Part 2, with wholesaler activities. Where possible, comparisons of dealer activities have been made year by year since 1952. "Central Residential Air Conditioning" is a report of surveys covering 1956 sales activities in 14 cities. Where possible, comparisons of dealer-contractor activities have been made year by year since 1952.

American Aviation Publications, 1001 Vermont Ave., N. W., Washington 5, D. C. Six studies: "Guided Missile Chart" from *Missiles and Rockets.* Includes production missiles and missile projects, company study projects, drones, space projects. "Guided Missile and Aircraft Expenditures, Fiscal Years 1951-1958" (in terms of percent)—three services total: Air Force, Navy, Army. "Guided Missile and Aircraft Expenditures, Fiscal Years 1951-1958" (millions of dollars)—three services total: Air Force, Navy, Army. "Department of Defense Expenditures by Major Budget Category-Fy 1959 with Eight-year Comparisons" (millions of dollars). "Who Buys What in Aviation" lists companies and individuals among the airlines, aircraft manufacturers, helicopter manufacturers, engine manufacturers, air materiel command, air materiel areas, Air Force depots, late AMC depot changes, Navy procurement offices, U. S. Marine Corps. "Army Aviation" includes data on expenditures for aircraft and related procurement for fiscal years 1951-1958; present and future size of Army aviation; procurement intelligence; contracts proposed and awarded; helicopters, flying crane and aerial jeep market; aircraft maintenance.

American Builder, 30 Church St., New York 7, N. Y. Five studies: "Building Forecast for 1958" summarizes trends in the building industry indicated for 1958; expected dollar volume of construction; volume of housing starts anticipated for the year. "Set Your Sights . . . 2,000,000 Homes a Year" reviews the basic long-range factors which point to this need for construction of 2 million homes a year by 1975. "Who Builds What and Where" reports on activities of the light construction industry, 1956-58. A comprehensive analysis of the building field; type of builders, volume of construction, location of various types of activity. "Remodeling Survey" reports on building and remodeling activity of 104 builders interviewed at the NAHB convention, Chicago, in January 1958. "Prefabrication Survey" reports on the use of prefabrication by builders.

American Institute of Plant Engineers, P. O. Box 185, Barrington, Ill.: "Profile of the Plant Engineer" presents a composite picture of the plant engineer—who he is . . . what he does . . . where he works. The study, a compilation of data from 520 replies to an AIPE membership questionnaire, provides the first national review of the many-faceted plant engineering profession. Its purpose is to provide a useful tool for plant engineers and executives in defining the responsibilities of their plant engineering departments. $1.50 a copy.

American Lumberman & Building Products Merchandiser, 139 N. Clark St., Chicago 2, Ill. Three studies: "Characteristics of the Lumber and Building Product Dealer Market," a nationwide study of facilities, operations and products sold (sponsored by National Retail Lumber Dealers Association and *AL and BPM*). "The Sale of Builders' Hardware and Related Items by Lumber and Building Products Dealers" provides data on where lumber dealers buy their builders' hardware and related items; percentages of dealers stocking and selling hardware items; inventory and sales; sales promotion; dealers doing contract builders' hardware business. "The Sale of Flooring Products by Lumber and Building Products Dealers" covers where lumber dealers buy their flooring; percentages of dealers stocking and selling various types of flooring; hardwood and resilient flooring inventory; sales and profits; amount of flooring business dealers do with various types of customers; sales and rental of floor installation and maintenance products by dealers.

American Machinist, 330 W. 42nd St., New York 36, N. Y. Seventeen studies: "Agriculture" gives the 1957 economic picture and 1954's farm equipment production statistics. "Electrical Products" covers appliances—complete report on this industry with 1945-56 figures on production; closed circuit TV—a growing industry review; communication equipment—production of telephone and telegraph equipment; hi-fidelity equipment—a new market for parts, materials and finishes; utilities—a special report from *Electrical World;* wire and cable—production data and wire identification report. "Road Machinery," a special report on the potential effects of the Federal Highway Program. "Shipbuilding," a study of this going industry. "Cleaning," a report on how to clean steels and nonferrous metals. "Compressed Air Power," a report which includes air compressors (production data in dollars and units); air motors (types and uses); components (cylinders, lubricators, valves, filters, gauges); vacuum applications (special editorial report).

Appliance Manufacturer, 201 N. Wells St., Chicago 6, Ill.: "An Advertising and Media Analysis of the Appliance Manufacturing Market" which includes data on the appliance manufacturing industry and on the individual appliances, covering a five-year period.

(*Continued on page 177*)

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Industry	% of Market Unsold
Missile Production and Fuels	99
Industrial Atomic Power Production	99
Instant Color Photography	99
Transistors	98
Dehumidifiers	98
Built-in Electrical Appliances (Ranges, Refrigerators, etc.)	97
Color Television	96
Prefabricated Products (Swimming Pools, Boats, etc.)	96
Electric Dishwashers	95
Electronic Office Machinery	94
Home Heating (Electric, Solar Power, etc.)	94
Garbage Disposers	93
Glass Fibers	91
Plastics Containers (Waste Baskets, Bottles, etc.)	85
Automobile Fuel-Injection Systems	85
Clothes Driers	85
Drugs, Medicines & Vaccines (for resistant diseases)	82

Survey of Industrial Buying Power

(Continued from page 16)

It is not uncommon in some industries for employment in an area dominated by a few plants to fall as much as 50 percent or increase by 200 percent within a single year. Consequently, the margin of error that must of necessity be accorded our estimates of industrial potential is far greater than for our regional estimates of population, sales, and income.

The most common application, takes the following form. A company making a certain type of industrial lubricant, let us say, may analyze its customers and decide that its market is composed mainly of plants producing chemicals, machinery, electrical machinery and transportation equipment, and also plants in a few 4-digit industries in other 2-digit groups, such as metal office furniture, and paper coating and glazing. It may feel that each of those industries is equally important, so that it will request a county-by-county listing (covering all counties and therefore achieving 100% coverage) of employment in each industry, plus a county total for the industries. The latter may be expressed as a percentage of the industry total for the entire United States to indicate the overall relative importance of each county.

Weighting the Industries

As an added refinement, the company may decide to give each of the four industries a different weight, depending on its actual sale to each industry, in which case it will want each county total to reflect these differential weights for each industry. The use of punch cards facilitates such calculations.

We have in our files complete county listings of each four-digit S.I.C. industry, and will be glad to furnish such lists to subscribers at a nominal cost. Those equipped to handle the data by mechanical means may purchase either Univac tapes, or IBM cards from us. In addition to the four-digit material, which involves 300,000 separate county estimates of employment and plants, we also have on IBM cards other county data on employment and plants.

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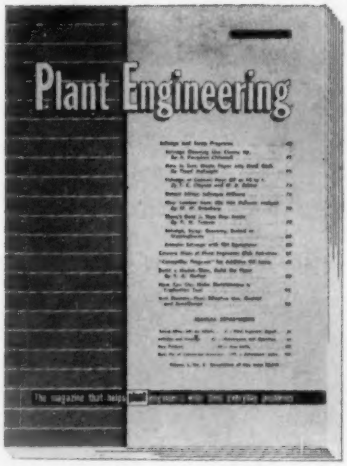

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1957 PLANT ENGINEERING—Editorial Breakdown by Subjects

	Percent
Distribution and use of Electricity	12.1
Illumination, Alarm and Public Address systems	4.2
Mechanical Power Transmission	5.4
Air Conditioning, Ventilation, Heating, Boilers	9.0
Piping and Accessories	5.4
Compressors, pumps, prime movers	4.5
Material Handling Equipment	8.7
Construction, maintenance, design, layout, and planning of buildings, grounds, equipment	11.3
Equipment maintenance, repair and installation	11.5
Tools and welding, special processes	4.3
Paints and protective coatings	6.1
Safety, sanitation and personnel services	3.1
Water supply, treatment, waste disposal, scrap	1.4
Lubrication and fuels	3.3
Instruments, measurement and control	2.6
Maintenance methods, planning, management	7.1
	100.0

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Market Information from Plant Engineering Research Dept.

We will be glad to help you in your market analysis. Our Research Department had some valuable field facts on a variety of products you can use. For specific data on your product, write or phone our representative nearest you, listed below.

S.I.C. Two-Digit Listing of Circulation and Plant Units Reached in the Manufacturing industries

	Circulation	Plants
19 Ordnance & Accessories	149	114
20 Food & Kindred Products	4,424	3,854
21 Tobacco Manufacturers	171	151
22 Textile Mill Products	2,666	2,378
23 Apparel & Other Finished Fabric Products	762	744
24 Lumber & Wood Products	1,382	1,294
25 Furniture & Fixtures	1,005	940
26 Paper & Allied Products	2,586	1,910
27 Printing, Publishing & Allied Industries	615	507
28 Chemicals & Allied Products	4,130	3,014
29 Products of Petroleum & Coal	1,110	683
30 Rubber Products	617	408
31 Leather & Leather Products	1,474	1,285
32 Stone, Clay & Glass Products	1,605	1,278
33 Primary Metal Industries	3,908	2,622
34 Fabricated Metal Products	5,653	4,710
35 Machinery	6,189	5,290
36 Electrical Machinery, Equipment & Supplies	2,598	1,998
37 Transportation Equipment	2,428	1,623
38 Professional, Scientific & Control Instruments	687	567
39 Miscellaneous Manufacturing Industries	1,046	946
10-14 Mining	1,052	912
15-17, 89 Engineering, Architectural & Construction Services	1,205	1,076
40-49 Transportation Communication, other Utilities	562	472
Service Establishments: Government, Retail & Wholesale Trade, Finance, Insurance, Real Estate	2,043	....
TOTAL	50,067	38,776

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SM SIC Manufacture of Food & Kindred Products—S.I.C. 20

SM Estimates for 100 Counties with 59.4% of 1957 Employment

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Cook, Ill.	1,048	95.5	Middlesex, Mass.	288	12.6	District of Columbia	81	7.3	Peoria, Ill.	67	4.8	Albany, N. Y.	63	3.7
Los Angeles, Cal.	920	48.7	Marion, Ind.	127	11.9	Dakota, Minn.	13	7.0	Westchester, N. Y.	97	4.8	Lake, Ind.	60	3.7
Philadelphia, Pa.	441	37.0	Hudson, N. J.	159	10.6	Calhoun, Mich.	49	7.0	Hillsborough, Fla.	99	4.8	Lancaster, Pa.	141	3.6
Kings, N. Y.	617	33.7	Dallas, Tex.	178	10.4	Black Hawk, Iowa	37	6.9	Henrico, Va.	65	4.8	Dane, Wisc.	80	3.5
Wayne, Mich.	411	23.6				Buchanan, Mo.	45	6.7	Hampden, Mass.	123	4.8	Summit, Ohio	73	3.5
St. Louis, Mo.	34	22.6	Hennepin, Minn.	175	10.3	Woodbury, Iowa	44	6.2	Providence, R. I.	211	4.7	Cumberland, Me.	64	3.5
New York, N. Y.	438	22.2	Fulton, Ga.	136	10.2	Oklahoma, Okla.	94	6.2	Davidson, Tenn.	94	4.7	Knox, Tenn.	61	3.4
Milwaukee, Wisc.	204	21.8	Orleans, La.	170	9.7	Dauphin, Pa.	88	6.1	Mecklenberg, N. C.	64	4.7	Passaic, N. J.	103	3.4
Baltimore, Md.	30	21.4	King, Wash.	224	9.7	Sacramento, Cal.	81	5.8	Montgomery, Ohio	76	4.6	Onondaga, N. Y.	98	3.4
Queens, N. Y.	209	21.4	Tarrant, Tex.	102	9.6	Bexar, Tex.	132	5.4	Sedgwick, Kan.	66	4.6	Fairfield, Conn.	110	3.3
			Harris, Tex.	164	9.6	Fresno, Cal.	135	5.4	San Diego, Cal.	108	4.5	Union, N. J.	73	3.3
Essex, N. J.	215	20.5	Denver, Colo.	157	9.6	Mower, Minn.	14	5.4	Minnehaha, S. D.	30	4.5	Wapello, Iowa	18	3.2
Douglas, Nebr.	112	18.3				Polk, Iowa	74	5.4	Dade, Fla.	143	4.4	Duval, Fla.	81	3.2
Allegheny, N.Y.	270	17.8	Wyandotte, Kan.	51	9.1	Vanderburgh, Ind.	55	5.4	York, Pa.	122	4.3	Dubuque, Iowa	37	3.1
Hamilton, Ohio	233	16.7	Franklin, Ohio	123	8.7	Stanislaus, Cal.	75	5.3	Berks, Pa.	122	4.2	Contra Costa, Cal.	33	3.1
San Francisco, Cal.	281	15.2	Monroe, N. Y.	195	8.6	Jefferson, Ala.	97	5.3	Stark, Ohio	87	4.2	Macon, Ill.	28	3.0
Alameda, Cal.	226	15.2	Jackson, Mo.	127	8.5	Lucas, Ohio	83	5.0	New Haven, Conn.	162	4.1	Hamilton, Tenn.	61	3.0
Cuyahoga, Ohio	267	15.1	Shelby, Tenn.	115	8.2	Essex, Mass.	171	4.9	San Joaquin, Cal.	93	4.1			
Suffolk, Mass.	280	14.9	Camden, N. J.	68	8.0	Polk, Fla.	47	4.9	Kent, Mich.	130	4.0	Total Above Counties	14,904	982.1
Erie, N. Y.	316	14.7	St. Clair, Ill.	69	7.8	Ramsey, Minn.	73	4.9	Worcester, Mass.	188	3.9			
Jefferson, Ky.	139	13.2	Multnomah, Ore.	177	7.8	Linn, Iowa	48	4.8	Hartford, Conn.	159	3.7	% of U.S.A. Total	35.2	59.4
Santa Clara, Cal.	152	12.6	Bronx, N. Y.	210	7.7									

SM Estimates, 1957, for 4-Digit Industries, S.I.C. 20

The 43 four-digit industries in this classification show wide variations in product value changes between 1954 and 1957, from minor declines in several industries to considerable gains in others. For example, chocolate and cocoa products (4-digit code 2072) dipped 4% in product value, while at the other end of the scale frozen fruits and vegetables (4-digit code 2037) jumped 38%. A sharp drop in cocoa prices in 1957 accounted for the lowered value in the former group, while the heavy gains in frozen fruits and vegetables resulted from the continued promotion of new products, including more frozen baked goods and greater varieties of meats, fish and frozen dinners.

The canned and frozen foods category generally (3-digit code 203) recorded the biggest percentage gain in the food industry. **No significant aggregate figures can be shown, according to the Census Bureau, for the 3-digit food industries or the 2-digit overall food industry because the overlapping of some segments would cause excessive duplication in the aggregate figure. The same holds true in certain other fields of manufacture, to which your attention will be called on the following pages.**

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	Gross Sales Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
201	*Meat Products*					
2011	Meat Packing, wholesale	2,367	9,906	10,302	220.2	220.8
2013	Prepared meats	1,316	1,415	1,472	45.0	44.0
2015	Poultry dressing plants	1,309	1,258	1,610	46.2	55.1
202	*Dairy Products*					
2021	Creamery butter	1,262	926	917	21.0	16.6
2022	Natural cheese	1,419	551	628	13.9	12.8
2023	Concentrated milk	359	688	832	13.3	11.7
2024	Ice cream and ices	1,587	727	822	36.4	30.0
2025	Special dairy products	187	295	330	7.3	6.7
2026	Fluid milk	1,695	353	420	14.1	13.9
2027	Fluid milk and other products	4,994	4,234	5,038	177.3	174.4
203	*Canned and Frozen Foods*					
2031	Canned sea food	239	238	259	15.1	16.4
2032	Cured fish	90	38	42	1.7	1.6
2033	Canned fruits and vegetables	1,758	2,229	2,831	119.8	120.4
2034	Dehydrated fruits and vegetables	148	192	228	7.0	6.0
2035	Pickles and sauces	717	482	598	21.9	23.5
2038	Packaged sea food	295	165	206	12.2	12.4
2037	Frozen fruits and vegetables	266	417	575	21.4	21.8
204	*Grain mill products*					
2041	Flour and meal	803	1,858	1,877	29.0	30.0
2042	Prepared animal feeds	2,292	2,702	2,647	59.9	51.9
2043	Cereal breakfast foods	46	348	426	11.5	13.0
2044	Rice milling	80	267	307	4.0	4.7
2045	Flour mixes	131	254	259	5.6	5.2
205	*Bakery products*					
2051	Bread and related products	6,103	3,067	3,496	246.3	254.5
2052	Biscuit and crackers	311	757	878	44.8	46.9
206	*Sugar*					
2061	Raw cane sugar	49	65	72	3.0	2.7
2062	Cane-sugar refining	23	864	1,002	16.0	13.7
2063	Beet sugar	65	291	355	11.0	12.4
207	*Candy and related products*					
2071	Confectionery products	1,434	993	1,122	66.8	66.8
2072	Chocolate and cocoa products	28	433	416	8.5	7.8
2073	Chewing gum	28	158	166	5.1	4.1
208	*Beverages*					
2081	Bottled soft drinks	4,643	1,113	1,313	91.6	97.2
2082	Beer and ale	301	1,857	2,080	81.3	79.1
2083	Malt	45	202	206	2.6	2.7
2084	Wines and brandy	262	244	288	5.7	5.5
2085	Distilled liquor	133	711	903	21.5	27.4
209	*Miscellaneous Foods*					
2091	Leavening compounds	43	71	81	2.8	3.1
2092	Shortening and cooking oils	102	935	954	9.3	10.4

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industry gives the

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Innocenti Corp.
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United States Steel Corp.
Republic Steel Corp.
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SM S I C Manufacture of Food & Kindred Products—(Cont'd)

SM Estimates, 1957, for 4-Digit Industries, S.I.C. 20 (Continued)

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	Gross Sales Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
2093	Margarine	33	192	194	2.6	2.9
2094	Corn wet milling	58	458	504	13.6	14.5
2095	Flavorings	558	446	544	10.6	11.4
2097	Manufactured ice	1,963	143	130	20.9	19.7
2098	Macaroni and spaghetti	233	150	170	7.1	7.4
2099	Food preparations, n. e. c.	2,599	3,256	3,647	72.0	70.9

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 20

2011—Meat Packing Plants

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Cook, Ill.	29	18.7
Douglas, Neb.	19	11.0
Dakota, Minn.	4	7.2
Los Angeles, Cal.	39	6.2
St. Clair, Ill.	9	6.2
Black Hawk, Iowa	1	6.2
Wyandotte, Kan.	12	5.4
Mower, Minn.	1	5.2
St. Louis, Mo.	22	4.8
Tarrant, Tex.	8	4.7
Woodbury, Iowa	7	4.4
Buchanan, Mo.	4	3.6
Baltimore, Md.	18	3.1
Milwaukee, Wis.	18	3.1
Minnehaha, S. D.	3	3.0
Oklahoma, Okla.	7	2.8
Wapello, Iowa	1	2.8
Allegheny, Pa.	20	2.7
Sedgwick, Kan.	6	2.6
Marion, Ind.	15	2.6
Total Above Counties	243	105.3
Industry Total	2,367	220.9
% of U. S.	10.3	47.7

2013—Prepared Meats

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Cook, Ill.	108	8.4
Philadelphia, Pa.	39	2.3
Suffolk, Mass.	29	1.6
Wayne, Mich.	43	1.6
Baltimore City, Md.	17	1.5
Kings, N. Y.	45	1.5
Los Angeles, Cal.	47	1.5
New York, N. Y.	46	1.4
Middlesex, Mass.	13	1.0
San Francisco, Cal.	33	.9
Essex, N. J.	23	.9
Queens, N. Y.	11	.7
Bronx, N. Y.	30	.7
Hamilton, Ohio	15	.7
Milwaukee, Wis.	25	.7
Erie, N. Y.	14	.6
Cuyahoga, Ohio	20	.5
Douglas, Neb.	4	.5
Alameda, Cal.	15	.5
Ramsey, Minn.	7	.5
Total Above Counties	573	28.0
Industry Total	1,316	44.0
% of U. S.	43.5	63.6

2015—Poultry Dressing Plants

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Hall, Ga.	6	1.6
Sussex, Del.	9	1.6
Los Angeles, Cal.	49	1.1
Stanislaus, Cal.	5	1.0
Benton, Ark.	8	.9
Cook, Ill.	22	.8
Gonzales, Tex.	6	.6
Washington, Ark.	5	.6
Clarke, Ga.	2	.6
Worcester, Md.	5	.6
Rockingham, Va.	4	.6
Jefferson, Ala.	5	.5
Harrison, Va.	4	.5
Fulton, Ga.	3	.5
Carroll, Ark.	2	.5
Fresno, Cal.	5	.5
Cherokee, Ga.	3	.4
Greene, Mo.	3	.4
Allen, Ind.	3	.4
Nobles, Minn.	1	.4
Total Above Counties	150	14.1
Industry Total	1,309	55.1
% of U. S.	11.5	25.6

2021—Creamery Butter

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Jefferson, Ky.	3	.4
Greene, Mo.	4	.3
Franklin, Ohio	2	.3
Olmstead, Minn.	1	.3
Erie, N. Y.	3	.3
Shawano, Wis.	3	.3
Chippewa, Wis.	5	.2
Woodbury, Iowa	2	.2
Lee, Iowa	1	.2
Chippewa, Minn.	3	.2
Morton, N. D.	4	.2
Barry, Mo.	1	.2
Cook, Ill.	9	.2
Hamilton, Ohio	3	.2
La Crosse, Wis.	4	.2
Allegheny, Pa.	1	.1
Augusta, Ohio	1	.1
Darke, Ohio	1	.1
St. Joseph, Mich.	1	.1
Dodge, Wis.	2	.1
Total Above Counties	54	4.2
Industry Total	1,262	16.6
% of U. S.	4.3	25.3

2022—Natural Cheese

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Dodge, Wis.	81	.5
Clark, Wis.	49	.4
Marathon, Wis.	45	.3
Van Wert, Ohio	1	.3
Grant, Wis.	44	.3
Green, Wis.	47	.3
Manitowoc, Wis.	25	.2
Fond du Lac, Wis.	20	.2
Sheboygan, Wis.	26	.2
Lafayette, Wis.	36	.2
Stephenson, Ill.	22	.2
Iowa, Wis.	34	.2
Kewaunee, Wis.	23	.2
Outagamie, Wis.	26	.2
Shawano, Wis.	30	.2
Otsego, N. Y.	1	.2
Brown, Wis.	26	.1
Oconto, Wis.	21	.1
Delaware, N. Y.	1	.1
Cook, Ill.	4	.1
Total Above Counties	532	4.5
Industry Total	1,419	12.8
% of U. S.	37.5	35.2

2023—Concentrated Milks

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Stanilaus, Cal.	5	.6
Merced, Cal.	4	.3
Manitowoc, Wis.	3	.3
Bond, Ill.	1	.2
Montgomery, Ill.	1	.2
Allegan, Mich.	1	.2
Fond du Lac, Wis.	1	.2
Outagamie, Wis.	2	.2
Lee, Ill.	2	.2
Dane, Wis.	5	.2
Canyon, Ida.	2	.2
Newton, Mo.	2	.2
Harrison, W. Va.	1	.2
Mason, Ky.	1	.2
Laurence, Mo.	1	.1
Washington, Va.	1	.1
Warren, Ky.	1	.1
Greene, Tenn.	1	.1
Rutherford, Tenn.	2	.1
Franklin, Ohio	1	.1
Total Above Counties	38	4.0
Industry Total	359	11.7
% of U. S.	10.6	34.2

2024—Ice Cream and Ices

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Philadelphia, Pa.	13	2.0
Los Angeles, Cal.	39	1.5
Cook, Ill.	32	1.1
Queens, N. Y.	9	.9
Kings, N. Y.	19	.7
Allegheny, Pa.	15	.7
Wayne, Mich.	21	.6
Baltimore City, Md.	11	.6
Washington, D. C.	9	.5
New York, N. Y.	7	.5
Erie, N. Y.	13	.4
Duval, Fla.	2	.4
Essex, N. J.	10	.4
Cuyahoga, Ohio	18	.4
Suffolk, Mass.	9	.4
Milwaukee, Wis.	8	.2
Middlesex, Mass.	14	.2
Monroe, N. Y.	12	.2
Providence, R. I.	19	.2
Dade, Fla.	11	.2
Total Above Counties	291	12.1
Industry Total	1,587	30.0
% of U. S.	18.3	40.3

2025—Special Dairy Products

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Cook, Ill.	7	1.0
Brown, Wis.	3	.6
DeKalb, Ga.	1	.3
Cooke, Tex.	2	.3
Clinton, Ill.	2	.2
Fulton, Ind.	1	.2
Ingham, Mich.	1	.2
Sheboygan, Wis.	2	.2
Waukesha, Wis.	2	.2
Greene, Mo.	4	.2
St. Joseph, Mich.	1	.2
Dallas, Tex.	1	.2
Bannock, Ida.	2	.2
Clearfield, Pa.	1	.2
Chenango, N. Y.	1	.2
Marathon, Wis.	2	.1
Queens, N. Y.	2	.1
Dodge, Wis.	2	.1
Total Above Counties	37	4.7
Industry Total	187	6.7
% of U. S.	19.8	70.1

2026—Fluid Milk

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Cook, Ill.	10	.5
Worcester, Mass.	42	.3
Middlesex, Mass.	26	.3
Queens, N. Y.	12	.3
Providence, R. I.	29	.2
San Mateo, Cal.	2	.2
Multnomah, Ore.	1	.2
San Bernardino, Cal.	4	.2
Los Angeles, Cal.	16	.2
Essex, Mass.	22	.2
New York, N. Y.	4	.2
Hartford, Conn.	19	.2
Bergen, N. J.	16	.2
Bristol, Mass.	31	.2
Bronx, N. Y.	10	.1
Richmond, N. Y.	1	.1
Polk, Iowa	2	.1
Jefferson, Ind.	1	.1
Franklin, Ohio	1	.1
Hennepin, Minn.	3	.1
Total Above Counties	252	4.0
Industry Total	1,695	13.9
% of U. S.	14.9	28.8

2027—Fluid Milk & Other Products

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Los Angeles, Cal.	49	5.1
Philadelphia, Pa.	20	3.7
Allegheny, Pa.	40	3.1
Cuyahoga, Ohio	32	2.4
Cook, Ill.	50	2.4
St. Louis City, Mo.	15	2.3
Wayne, Mich.	32	2.2
Washington, D. C.	7	2.1
Baltimore City, Md.	9	2.1
Hamilton, Ohio	31	2.0
Alameda, Cal.	11	1.8
Jackson, Mo.	9	1.6
Marion, Ind.	13	1.6
Queens, N. Y.	11	1.5
Suffolk, Mass.	11	1.5
Erie, N. Y.	46	1.5
Harris, Tex.	8	1.5
King, Wash.	18	1.4
New Haven, Conn.	25	1.4
Essex, N. J.	15	1.3
Total Above Counties	452	42.5
Industry Total	4,994	174.4
% of U. S.	9.1	24.4

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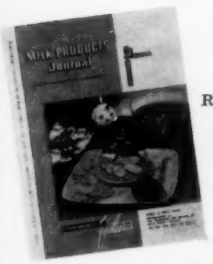

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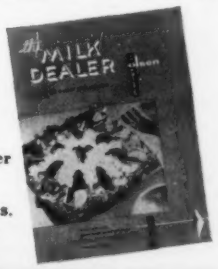

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Manufacture of Food & Kindred Products—S.I.C. 20 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 20 (Continued)

2031—Canned Seafood

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Los Angeles, Cal.	11	3.6
San Diego, Cal.	3	1.8
Cumberland, Me.	7	.9
Harrison, Miss.	13	.9
Washington, Me.	20	.9
Jefferson, La.	3	.8
Clatsop, Ore.	7	.8
Hancock, Me.	8	.4
Terrebonne, La.	8	.4
Skagit, Wash.	6	.4
Knox, Me.	5	.4
Monterey, Cal.	7	.4
Cape May, N. J.	2	.2
Mobile, Ala.	2	.2
King, Wash.	14	.2
Contra Costa, Cal.	1	.2
Charleston, S. C.	4	.2
Orleans, La.	7	.2
Grays Harbor, Wash.	9	.2
Plaquemines, La.	4	.2
Total Above Counties	141	13.3
Industry Total	239	16.4
% of U. S.	59.0	81.1

2032—Cured Fish

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Cook, Ill.	5	.2
Kings, N. Y.	13	.2
New York, N. Y.	3	.2
Kent, Md.	1	.2
Los Angeles, Cal.	2	.1
Total Above Counties	24	.9
Industry Total	90	1.6
% of U. S.	26.7	56.3

2033—Canned Fruits and Vegetables

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Camden, N. J.	3	5.7
Santa Cruz, Cal.	30	5.5
Cook, Ill.	49	4.6
Alameda, Cal.	20	4.6
Honolulu, Hawaii	10	4.6
Polk, Fla.	12	3.4
Monroe, N. Y.	10	2.8
Sacramento, Cal.	8	2.8
San Joaquin, Cal.	15	2.5
Baltimore, Md.	12	2.1
Dorchester, Md.	17	1.7
Allegheny, Pa.	1	1.5
Maui, Hawaii	3	1.2
Hidalgo, Tex.	15	1.1
Stanislaus, Cal.	9	1.0
Newaygo, Mich.	1	1.0
Adams, Pa.	11	1.0
Yakima, Wash.	17	1.0
Contra Costa, Cal.	5	1.0
Chester, Pa.	16	1.0
Total Above Counties	264	50.1
Industry Total*	1,771	120.4
% of U. S.	14.9	41.6

2034—Dehydrated Fruits and Vegetables

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Santa Clara, Cal.	18	1.5
Fresno, Cal.	22	1.4
Solano, Cal.	2	.3
Cook, Ill.	7	.3
Meriwether, Ga.	1	.3
Los Angeles, Cal.	5	.2
Yakima, Wash.	5	.2
Orleans, N. Y.	3	.2
Hudson, N. J.	1	.2
Bonneville, Ida.	1	.2
Merced, Cal.	5	.2
Wayne, N. Y.	3	.2
Sonoma, Cal.	9	.1
Stanilaus, Cal.	5	.1
Tulare, Cal.	3	.1
Alameda, Cal.	2	.1
Total Above Counties	92	5.6
Industry Total	148	6.0
% of U. S.	62.2	93.3

2035—Pickles and Sauces

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Cook, Ill.	29	1.6
Los Angeles, Cal.	42	.9
Kings, N. Y.	36	.9
Grady, Ga.	2	.9
Baltimore City, Md.	13	.6
Alameda, Cal.	11	.6
Brown, Wis.	5	.5
Hudson, N. J.	9	.5
Orleans, La.	5	.5
Queens, N. Y.	8	.4
Allegheny, Pa.	3	.4
Philadelphia, Pa.	15	.4
Vigo, Ind.	3	.4
New York, N. Y.	10	.4
Ottawa, Mich.	3	.4
Muscatine, Iowa	1	.4
Jefferson, Ky.	3	.4
Dallas, Tex.	10	.4
Wayne, N. C.	1	.4
Santa Clara, Cal.	4	.4
Total Above Counties	215	11.4
Industry Total	717	23.5
% of U. S.	30.0	48.5

2036—Packaged Seafood

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Glynn, Ga.	3	1.0
Norfolk, Va.	3	.9
Essex, Mass.	12	.9
Suffolk, Mass.	21	.7
Terrebonne, La.	4	.5
Cameron, Tex.	3	.5
Dorchester, Md.	6	.4
Somerset, Md.	10	.4
Chatham, Ga.	2	.4
King, Wash.	6	.4
Knox, Me.	4	.4
Clatsop, Ore.	7	.4
Cumberland, N. J.	6	.3

*Including Hawaii

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SM S I C Manufacture of Food & Kindred Products—(Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 20 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Lancaster, Va.	10	.3
Bristol, Mass.	4	.2
Talbot, Md.	5	.2
Dade, Fla.	2	.2
New York, N. Y.	13	.2
Whatcom, Wash.	1	.2
Hillsborough, Fla.	4	.2
Total Above Counties	126	8.7
Industry Total	295	12.4
% of U. S.	42.7	70.2

2037—Frozen Fruits and Vegetables

Cumberland, N. J.	1	1.4
Pasco, Fla.	1	1.2
Polk, Fla.	6	1.1
Santa Cruz, Cal.	8	1.0
Santa Clara, Cal.	8	.8
Canyon, Ida.	2	.8
Orange, Fla.	3	.7
Riverside, Cal.	1	.7
Stanislaus, Cal.	4	.7
Marion, Ore.	4	.6
Orange, Cal.	4	.4
Faribault, Minn.	1	.4
Northampton, Va.	1	.4
Livingston, N. Y.	1	.4
Martin, Minn.	1	.4
Erie, Pa.	2	.4
Pinellas, Fla.	1	.4
King, Wash.	5	.4
Snohomish, Wash.	5	.3
Washington, Ore.	5	.3
Total Above Counties	64	12.7
Industry Total	266	21.8
% of U. S.	24.1	58.3

2041—Flour and Meal

Erie, N. Y.	8	2.1
Hennepin, Minn.	6	1.1
Sangamon, Ill.	1	1.0
King, Wash.	3	.7
Vanderburgh, Ind.	1	.7
Clay, Mo.	4	.6
Cook, Ill.	5	.5
Jackson, Mo.	3	.5
Saline, Kan.	3	.5
Los Angeles, Cal.	6	.4
Wayne, Mich.	1	.4
Madison, Ill.	1	.4
Sedgwick, Kan.	3	.4
Cowley, Kan.	3	.4
Jefferson, Ky.	1	.4
Morgan, Ala.	1	.4
Grayson, Tex.	2	.4
Spokane, Wash.	5	.4
Douglas, Neb.	3	.3
Weber, Utah	3	.3
Total Above Counties	83	11.9
Industry Total	803	30.0
% of U. S.	7.8	39.7

2042—Prepared Animal Feeds

Erie, N. Y.	19	1.8
Hennepin, Minn.	19	1.5
Los Angeles, Cal.	52	1.4
Cook, Ill.	21	1.1
Tarrant, Tex.	12	.9
Shelby, Tenn.	9	.7
Jefferson, Ala.	4	.7
Jackson, Mo.	12	.6
Hamilton, Ohio	7	.6
St. Clair, Ill.	11	.6
Douglas, Neb.	11	.6
Polk, Iowa	15	.5
Lake, Ind.	3	.4
St. Louis City, Mo.	9	.4
Davidson, Tenn.	9	.4
Alameda, Cal.	8	.4
Multnomah, Ore.	13	.4
New York, N. Y.	7	.4
Franklin, Vt.	3	.4
Cayuga, N. Y.	3	.3
Total Above Counties	247	14.1
Industry Total	2,292	51.9
% of U. S.	10.8	27.2

2043—Cereal Breakfast Foods

Calhoun, Mich.	6	6.9
Linn, Iowa	2	1.6
Summit, Ohio	1	.8
Buchanan, Mo.	1	.8
Niagara, N. Y.	1	.8
Alameda, Cal.	2	.5
Douglas, Neb.	2	.5
Hennepin, Minn.	3	.2
Worcester, Mass.	2	.2
Erie, N. Y.	2	.2
Vanderburgh, Ind.	1	.2
Total Above Counties	23	12.7
Industry Total	46	13.0
% of U. S.	50.0	97.7

2044—Rice Milling

Harris, Tex.	6	1.1
Acadia, La.	18	.7
Vermilion, La.	7	.5
Arkansas, Ark.	8	.5
Jefferson, Tex.	3	.2
Sacramento, Cal.	1	.2
Orleans, La.	5	.2
Craighead, Ark.	2	.1
Calcasieu, La.	3	.1
San Francisco, Cal.	3	.1
Total Above Counties	56	3.7
Industry Total	80	4.7
% of U. S.	70.0	78.7

2045—Flour Mixes

Cook, Ill.	16	1.2
Erie, N. Y.	2	.7
San Joaquin, Cal.	1	.4
New York, N. Y.	3	.4
Butler, Ohio	1	.4
Los Angeles, Cal.	9	.3
Middlesex, N. J.	1	.2
Douglas, Neb.	3	.2
Montgomery, Pa.	1	.2
Kings, N. Y.	2	.2
Lucas, Ohio	1	.2
Total Above Counties	40	4.4
Industry Total	131	5.2
% of U. S.	30.5	84.6

2051—Bread and Related Product

Cook, Ill.	192	11.2
Los Angeles, Cal.	122	9.9
Philadelphia, Pa.	92	8.3
Wayne, Mich.	97	7.8
Kings, N. Y.	166	6.1
Queens, N. Y.	56	5.8
Essex, N. J.	54	4.6
New York, N. Y.	93	4.5
St. Louis City, Mo.	47	4.3
Cuyahoga, Ohio	51	4.1
Allegheny, Pa.	60	3.8
Baltimore, Md.	50	3.1
Suffolk, Mass.	58	3.0
Bronx, N. Y.	58	3.0
Erie, N. Y.	54	2.8
San Francisco, Cal.	54	2.7
Milwaukee, Wis.	37	2.6
Hamilton, Ohio	32	2.5
Marion, Ind.	24	2.4
Dallas, Tex.	30	2.4
Total Above Counties	1,427	94.9
Industry Total	6,103	151.5
% of U. S.	23.4	37.3

2052—Biscuit and Crackers

Queens, N. Y.	3	2.7
New York, N. Y.	12	2.7
Philadelphia, Pa.	11	2.3
Middlesex, Mass.	4	1.7
Passaic, N. J.	2	1.5
Los Angeles, Cal.	13	1.5
Fulton, Ga.	3	1.5
Alameda, Cal.	4	1.3
Kent, Mich.	4	1.0
Hamilton, Ohio	6	1.0
Denver, Col.	4	1.0
St. Louis, Mo.	9	.9
Montgomery, Ohio	3	.8
Allegheny, Pa.	3	.8
Douglas, Neb.	1	.7
Richmond, Va.	1	.7
Wyandotte, Kan.	1	.7
Union, N. J.	1	.7
Berks, Pa.	12	.7
Harris, Tex.	1	.7
Total Above Counties	98	24.9
Industry Total	311	46.9
% of U. S.	31.5	53.1

2061—Raw Cane Sugar

Hawaii, Hawaii	14	2.9
Maui, Hawaii	3	2.5
Kauai, Hawaii	5	1.9
Lafourche, La.	6	.7
Hendry, Fla.	1	.4
St. Mary, La.	4	.3
Assumption, La.	5	.3
Indian River, Fla.	1	.2
Iberia, La.	7	.2
Iberville, La.	2	.1
St. Martin, La.	3	.1
West Baton Rouge, La.	3	.1
Lafayette, La.	2	.1
St. James, La.	2	.1
St. John the Baptist, La.	3	.1
Vermilion, La.	3	.1
Total Above Counties	64	10.1
Industry Total*	71	10.4
% of U. S.	90.1	97.1

* Including Hawaii

2062—Cane Sugar Refining

Philadelphia, Pa.	2	2.2
Kings, N. Y.	2	1.5
Suffolk, Mass.	2	1.2
Queens, N. Y.	1	1.1
Baltimore City, Md.	1	1.1
Contra Costa, Cal.	1	1.1
St. Bernard, La.	1	1.1
Westchester, N. Y.	1	.6
Chatham, Ga.	1	.6
St. James, La.	1	.6
Fort Bend, Tex.	1	.6
St. John the Baptist, La.	1	.6
Assumption, La.	1	.4
Lafourche, La.	1	.4
Orleans, La.	1	.3
Terrebonne, La.	1	.3
Total Above Counties	19	13.7
Industry Total	23	13.7
% of U. S.	82.6	100.0

2063—Beet Sugar

Monterey, Cal.	1	.7
Weld, Col.	4	.6
Scotts Bluff, Neb.	3	.5
Yolo, Cal.	2	.5
San Joaquin, Cal.	2	.5
Ventura, Cal.	1	.4
Alameda, Cal.	1	.4
Malheur, Ore.	1	.4
Santa Barbara, Cal.	1	.4
Minidoka, Ida.	1	.4
Morgan, Col.	2	.3
Larimer, Col.	2	.3
Huron, Mich.	2	.3
Putnam, Ohio	1	.2
Bay, Mich.	1	.2
Carver, Minn.	1	.2
Cerro Gordo, Iowa	1	.2
Butte, S. D.	1	.2
Hall, Neb.	1	.2
Otero, Col.	2	.2
Total Above Counties	31	7.1
Industry Total	65	12.4
% of U. S.	47.7	57.3

2071—Confectionery Products

Cook, Ill.	107	13.3
Philadelphia, Pa.	58	3.8
Middlesex, Mass.	26	3.4
Kings, N. Y.	54	3.4
Los Angeles, Cal.	73	2.1
Queens, N. Y.	15	2.0
Suffolk, Mass.	20	2.0
Suffolk, Va.	2	1.7
San Francisco, Cal.	22	1.4
New York, N. Y.	38	1.3
Allegheny, Pa.	20	1.3
Essex, N. J.	13	1.2
Milwaukee, Wis.	14	1.2
Berks, Pa.	18	1.1
Baltimore, Md.	26	.7
Marion, Ill.	1	.7
Hamilton, Ohio	18	.7
Muscogee, Ga.	3	.7
Hudson, N. J.	6	.7
Wayne, Mich.	16	.6
Total Above Counties	550	43.3
Industry Total	1,434	66.8
% of U. S.	38.4	64.8

2072—Chocolate and Cocoa Products

Dauphin, Pa.	1	3.2
Oswego, N. Y.	1	.9
Suffolk, Mass.	2	.6
Kings, N. Y.	2	.6
Erie, N. Y.	1	.4
Lancaster, Pa.	3	.4
Philadelphia, Pa.	2	.4
Milwaukee, Wis.	2	.3
Cook, Ill.	3	.3
Bristol, Mass.	1	.2
San Francisco, Cal.	3	.2
Essex, N. J.	2	.1
Total Above Counties	23	7.6
Industry Total	28	7.8
% of U. S.	82.1	97.4

2073—Chewing Gum

Queens, N. Y.	1	1.0
Kings, N. Y.	4	.9
Cook, Ill.	2	.8
Philadelphia, Pa.	2	.4
Montgomery, N. Y.	1	.3
Suffolk, Mass.	3	.2
Allegheny, Pa.	1	.2

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	Classified by SIC Food Processing Industries —December, 1957	Number of Plants	Circulation
201	Meat Products	1,699	3,415
202	Dairy Products	2,943	5,303
203	Canned, Preserved, Frozen Fruits, Vegetables and Sea Foods	3,068	6,174
204	Grain-Mill Products	1,951	3,892
205	Bakery Products	2,048	3,682
206	Sugar	161	480
207	Confectionery and Related Products	764	1,838
208	Beverage Industries, Alcoholic and Non-Alcoholic except Distilleries	2,406	4,578
209	Miscellaneous Food Preparations and Kindred Products	2,154	5,166
	Cold Storage Warehouses	10	18
35	Equipment and Supplies for Food Industries	—	2,296
	Government	—	102
	Consultants	—	377
	Educational	—	284
	TOTAL COVERAGE OF PLANTS AND INDUSTRIES IN THE UNITED STATES	**17,204**	**37,608**

*FOOD BUSINESS covers the sales side of the Food Industry.

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SM SIC Manufacture of Food & Kindred Products—(Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 20 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Delaware, Pa.	2	.1
Shelby, Tenn.	1	.1
Total Above Counties	17	4.0
Industry Total	28	4.1
% of U. S.	60.7	97.6

2081—Bottled Soft Drinks

Cook, Ill.	58	2.7
Philadelphia, Pa.	41	1.9
Wayne, Mich.	25	1.9
Los Angeles, Cal.	43	1.8
Essex, N. J.	17	1.7
Kings, N. Y.	50	1.5
St. Louis City, Mo.	21	1.3
Queens, N. Y.	12	1.2
Cuyahoga, Ohio	23	1.1
Allegheny, Pa.	38	1.1
Baltimore City, Md.	13	1.0
Hamilton, Ohio	14	1.0
Orleans, La.	10	1.0
Dallas, Tex.	10	1.0
Shelby, Tenn.	11	.8
Marion, Ind.	8	.8
Fulton, Ga.	12	.8
Harris, Tex.	12	.7
Suffolk, Mass.	20	.6
Washington, D. C.	8	.6
Total Above Counties	448	24.5
Industry Total	4,643	97.2
% of U. S.	9.6	25.0

2082—Beer and Ale

Milwaukee, Wis.	6	8.9
Kings, N. Y.	5	7.3
Essex, N. J.	6	6.3
St. Louis City, Mo.	7	5.3
Wayne, Mich.	6	3.4
Los Angeles, Cal.	7	3.2
San Francisco, Cal.	6	2.5
Cuyahoga, Ohio	6	2.1
Orleans, La.	4	1.9
Cook, Ill.	13	1.9
Allegheny, Pa.	4	1.8
Baltimore City, Md.	4	1.7
Ramsey, Minn.	2	1.7
Hamilton, Ohio	6	1.3
New York, N. Y.	1	1.2
Philadelphia, Pa.	5	1.2
Bexar, Tex.	2	1.1
Jefferson, Ky.	3	1.1
Monroe, N. Y.	3	1.0
Providence, R. I.	2	.9
Total Above Counties	98	55.8
Industry Total	301	79.1
% of U. S.	32.6	70.5

2083—Malt

Milwaukee, Wis.	6	.8
Cook, Ill.	4	.4
Jefferson, Wis.	2	.4
Manitowoc, Wis.	2	.2
Hennepin, Minn.	5	.2
Erie, N. Y.	4	.1
Total Above Counties	23	2.1
Industry Total	45	2.7
% of U. S.	51.1	77.8

2084—Wines and Brandy

Fresno, Cal.	23	.9
Stanislaus, Cal.	3	.4
San Joaquin, Cal.	14	.4
Steuben, N. Y.	5	.4
New York, N. Y.	18	.3
San Bernardino, Cal.	18	.3
Napa, Cal.	13	.3
Sonoma, Cal.	19	.3
Los Angeles, Cal.	4	.2
Kings, N. Y.	4	.2
Bergen, N. J.	1	.2
Alameda, Cal.	10	.2
Baltimore City, Md.	1	.2
Van Buren, Mich.	6	.2
Atlantic, N. J.	5	.1
Ontario, N. Y.	2	.1
Total Above Counties	146	4.7
Industry Total	262	5.5
% of U. S.	55.7	85.5

2085—Distilled Liquor, Except Brandy

Jefferson, Ky.	15	5.4
Dearborn, Ind.	3	3.2
Philadelphia, Pa.	6	2.0
Baltimore, Md.	6	1.7
Franklin, Ky.	3	1.4
Nelson, Ky.	12	1.4
Hamilton, Ohio	4	1.2
Daviess, Ky.	2	.9
New York, N. Y.	2	.9
Tazewell, Ill.	1	.9
Armstrong, Pa.	1	.9
Woodford, Ky.	4	.7
Suffolk, Mass.	5	.6
Moore, Tenn.	1	.5
Union, N. J.	2	.5
Bullitt, Ky.	1	.5
Muscatine, Iowa	1	.2
Anderson, Ky.	4	.2
Fresno, Cal.	1	.2
Vigo, Ind.	2	.2
Total Above Counties	77	23.5
Industry Total	133	27.4
% of U. S.	57.9	85.8

2091—Leavening Compounds

Westchester, N. Y.	2	.5
Tazewell, Ill.	1	.5
Middlesex, N. J.	2	.2
Milwaukee, Wis.	3	.2
Cook, Ill.	2	.2
Essex, N. J.	2	.2
St. Louis City, Mo.	2	.2
Washington, D. C.	1	.2
Providence, R. I.	1	.1
Total Above Counties	16	2.3
Industry Total	43	3.1
% of U. S.	37.2	74.2

2092—Shortening and Cooking Oils

Cook, Ill.	10	1.2
Hamilton, Ohio	1	.8
Shelby, Tenn.	3	.8
Bergen, N. J.	1	.8
Los Angeles, Cal.	10	.7
Hamilton, Tenn.	2	.5
Richmond, N. Y.	1	.4
Lake, Ind.	1	.4
Franklin, Ohio	1	.4
Grayson, Tex.	2	.4
Dallas, Tex.	2	.3
Jefferson, La.	2	.3
Norfolk, Va.	2	.2
Bibb, Ga.	1	.2
Jefferson, Ky.	1	.2
Houston, Ala.	1	.2
Tarrant, Tex.	2	.2
Oklahoma, Okla.	1	.2
Alameda, Cal.	1	.2
Macon, Ill.	1	.2
Total Above Counties	46	8.6
Industry Total	102	10.4
% of U. S.	45.1	82.7

2093—Margarine

Marion, Ind.	1	.5
Dallas, Tex.	3	.3
Wayne, Mich.	1	.2
Cook, Ill.	2	.2
Hudson, N. J.	1	.2
Hamilton, Ohio	2	.2
Baltimore City, Md.	1	.2
Alameda, Cal.	1	.2
Huron, Ohio	1	.2
Grayson, Tex.	1	.2
Fulton, Ga.	2	.1
Total Above Counties	16	2.5
Industry Total	33	2.9
% of U. S.	48.5	86.2

2094—Corn Wet Milling

Cook, Ill.	2	3.1
Macon, Ill.	1	2.2
Clinton, Iowa	1	1.6
Tazewell, Ill.	1	1.6
Lake, Ind.	1	1.1
Linn, Iowa	2	.8
Madison, Ill.	1	.8
Lee, Iowa	1	.8
Clay, Md.	1	.8
St. Louis City, Mo.	1	.4
Marion, Ind.	1	.4
Nueces, Tex.	1	.4
Aroostook, Me.	18	.1
Total Above Counties	32	14.1
Industry Total	58	14.5
% of U. S.	55.2	97.2

2095—Flavorings

Cook, Ill.	53	1.7
Los Angeles, Cal.	27	.7
Kings, N. Y.	29	.6
New York, N. Y.	33	.4
Muscogee, Ga.	1	.4
Monroe, N. Y.	6	.4
Queens, N. Y.	10	.4
San Bernardino, Cal.	2	.4
St. Louis City, Mo.	15	.4
Dallas, Tex.	7	.3
Bronx, N. Y.	13	.2
Allegheny, Pa.	6	.2
Cuyahoga, Ohio	7	.2
Baltimore City, Md.	11	.2
Hamilton, Ohio	10	.2
Philadelphia, Pa.	19	.2
Richmond, Va.	3	.2
Fulton, Ga.	7	.2
Suffolk, Mass.	14	.1
Essex, N. J.	7	.1
Total Above Counties	280	7.5
Industry Total	558	11.4
% of U. S.	50.2	65.8

2097—Manufactured Ice

Cook, Ill.	21	.5
Nueces, Tex.	5	.4
Orleans, La.	20	.4
St. Louis City, Mo.	4	.4
Los Angeles, Cal.	22	.4
Fulton, Ga.	8	.3
Harris, Tex.	17	.3
Wayne, Mich.	5	.2
Philadelphia, Pa.	12	.2
Bronx, N. Y.	3	.2
Shelby, Tenn.	10	.2
Jefferson, Ala.	13	.2
Duval, Fla.	8	.2
Monterey, Cal.	12	.2
Hillsborough, Fla.	8	.1
Erie, N. Y.	10	.1
Marion, Ind.	7	.1
New York, N. Y.	4	.1
Franklin, Ohio	3	.1
Washington, D. C.	3	.1
Total Above Counties	195	4.7
Industry Total	1,963	19.7
% of U. S.	9.9	23.9

2098—Macaroni and Spaghetti

Kings, N. Y.	13	.7
Queens, N. Y.	9	.6
Cook, Ill.	16	.5
Hudson, N. J.	2	.4
Los Angeles, Cal.	19	.3
Bergen, N. J.	3	.3
Lebanon, Pa.	1	.2
Jackson, Mo.	1	.2
Allegheny, Pa.	3	.2
Vigo, Ind.	1	.2
Hennepin, Minn.	3	.2
Middlesex, Mass.	2	.2
St. Louis City, Mo.	5	.2
Orleans, La.	5	.2
Alameda, Cal.	6	.2
San Francisco, Cal.	16	.2
Douglas, Neb.	2	.2
Jefferson, Ky.	1	.2
Shelby, Tenn.	1	.1
Lake, Ill.	2	.1
Total Above Counties	111	5.4
Industry Total	233	7.4
% of U. S.	47.6	73.0

2099—Miscellaneous Food Preparations

Cook, Ill.	135	5.7
Hudson, N. J.	25	2.9
Los Angeles, Cal.	144	2.8
Kings, N. Y.	64	2.4
San Francisco, Cal.	42	1.6
Mecklenberg, N. C.	9	1.5
Douglas, Neb.	11	1.3
Fulton, Ga.	23	1.2
New York, N. Y.	75	1.2
St. Louis City, Mo.	38	1.1
Harris, Tex.	19	1.1
Orleans, La.	27	1.1
Dallas, Tex.	40	1.0
Philadelphia, Pa.	46	1.0
Baltimore, Md.	29	1.0
Queens, N. Y.	16	.9
Jackson, Mo.	17	.9
Cuyahoga, Ohio	27	.8
Hamilton, Ohio	16	.8
Suffolk, Mass.	29	.8
Total Above Counties	832	31.1
Industry Total	2,509	70.9
% of U. S.	32.0	43.9

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SM SIC Manufacture of Tobacco Products—S.I.C. 21

SM Estimates for 79 Counties with 100% of 1957 Employment

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Forsyth, N. C.	10	10.2	Lancaster, Pa.	13	1.2	Centre, Pa.	1	.5	Hillsborough, N. H.	3	.2	Boyle, Ky.	1	.1
Henrico, Va.	12	8.6	Allen, Ohio	3	1.1	Wayne, Mich.	6	.5	Pinellas, Fla.	1	.2	Polk, Fla.	3	.1
Jefferson, Ky.	13	7.8	Middlesex, N. J.	3	.9	Granville, N. C.	3	.4	Greene, Tenn.	1	.2	Kings, N. Y.	16	.1
Durham, N. C.	7	6.2	Ware, Ga.	1	.9	Guilford, N. C.	2	.4	Sumner, Tenn.	1	.2	Houston, Ala.	1	.1
Hillsborough, Fla.	38	4.6	Gadsden, Fla.	8	.8	Shelby, Tenn.	2	.4	Los Angeles, Cal.	2	.2	Adams, Pa.	3	.1
Philadelphia, Pa.	21	4.1	Orleans, La.	2	.8	Wilson, N. C.	4	.4	Johnson, N. C.	9	.2	Milwaukee, Wis.	9	.1
Lenoir, N. C.	5	3.8	Lehigh, Pa.	4	.7	Suffolk, Mass.	9	.4	Lucas, Ohio	1	.1	Martin, N. D.	2	.1
Luzerne, Pa.	9	3.8	St. Louis, Mo.	8	.7	Dutchess, N. Y.	1	.3	Dauphin, Pa.	2	.1	Bourbon, Ky.	1	.1
Nash, N. C.	3	3.3	Fayette, Ky.	8	.7	Northumberland, Pa.	1	.3	Van Wert, Ohio	1	.1	Wake, N. C.	2	.1
Robeson, N. C.	4	3.2	Wayne, N. C.	1	.7	Davidson, Tenn.	3	.3	Vance, N. C.	1	.1	Florence, S. C.	2	.1
Rockingham, N. C.	3	2.7	Hudson, N. J.	1	.6	Edgecombe, N. C.	2	.3	Bexar, Tex.	1	.1	Marion, S. C.	2	.1
Dinwiddie, Va.	4	2.4	Ohio, W. Va.	4	.6	Clinton, Ind.	1	.3	Hancock, Ohio	1	.1			
Duval, Fla.	2	2.4	Camden, N. J.	1	.6	Montgomery, Tenn.	3	.3	Vanderburgh, Ind.	2	.1	Total Above Counties	467	93.6*
Pitt, N. C.	5	2.3	Dallas, Ala.	1	.6	Queens, N. Y.	3	.3	Cabell, W. Va.	1	.1			
York, Pa.	56	2.2	Mercer, N. J.	2	.6	Essex, N. J.	1	.3	Berks, Pa.	4	.1	% of U.S.A. Total	74.5	100.0
Pittsylvania, Va.	6	1.5	New York, N. Y.	59	.6				New Haven, Conn.	12	.1			
Lackawanna, Pa.	4	1.4	Cook, Ill.	23	.5				Warren, Ky.	1	.1			
Charleston, S. C.	1	1.3	Halifax, Va.	4	.5									

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 21

Some duplication of enterprise, though not as extensive as in most industries, exists in the four segments of the tobacco manufacturers industry. So a 3-digit total here would have some practical application. The overall industry (code number 21), with $3,419,000,000 gross sales in 1957, shows a rise of 7.3% over the 1954 Census figure of $3,185,000,000. Cigarettes, continuing to gain despite occasional health-scare publicity, are up 19% over 1954. Cigars have improved also, though up only 6%, but chewing and smoking tobacco and tobacco stemming and re-drying both show declines in value of products shipped in the period since 1954.

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	Gross Sales Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
2111	Cigarettes	519	1,641	1,953	30.0	33.6
2121	Cigars	410	339	359	38.5	31.7
2131	Chewing and smoking tobacco	69	162	147	7.5	6.3
2141	Tobacco stemming and redrying	133	1,043	960	18.8	16.5

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 21

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2111—Cigarettes		
Forsyth, N. C.	1	7.9
Richmond, Va.	4	6.9
Jefferson, Ky.	4	6.9
Durham, N. C.	2	5.5
Rockingham, N. C.	1	2.3
Petersburg, Va.	1	2.2
Hudson, N. J.	1	.8
Suffolk, N. Y.	1	.8
Philadelphia, Pa.	1	.2
New York, N. Y.	3	.1
Total Above Counties	19	33.6
Industry Total	19	33.6
% of U. S.	100.0	100.0

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2121—Cigars		
Hillsborough, Fla.	38	4.0
Philadelphia, Pa.	19	3.4
Luzerne, Pa.	7	3.2
York, Pa.	50	2.3
Duval, Fla.	2	2.1
Charleston, S. C.	1	1.1
Lackawanna, Pa.	4	1.0
Orleans, La.	2	.9
Lehigh, Pa.	4	.
Mercer, N. J.	2	.7
Lancaster, Pa.	3	.6
Camden, N. J.	1	.6
Dallas, Ala.	1	.6
Jefferson, Ky.	3	.6
Allen, Ohio	3	.6
Vanderburgh, Ind.	2	.6
Richmond, Va.	1	.6
Ware, Ga.	1	.6
Gadsden, Fla.	3	.5
Middlesex, N. J.	2	.4
Total Above Counties	149	25.2
Industry Total	410	31.7
% of U. S.	36.3	79.5

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2131—Chewing and Smoking Tobacco		
Forsyth, N. C.	3	2.2
Richmond, Va.	3	.7
St. Louis City, Mo.	4	.6
Shelby, Tenn.	2	.4
Cook, Ill.	1	.3
Ohio, W. Va.	1	.3
Middlesex, N. J.	1	.3
Davidson, Tenn.	3	.3
Wayne, Mich.	3	.2
Petersburg, Va.	1	.2
Warren, Ky.	1	.2
Jefferson, Ky.	2	.2
Lucas, Ohio	1	.1
Sumner, Tenn.	1	.1
Total Above Counties	27	6.1
Industry Total	65	6.3
% of U. S.	41.5	96.8

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2141—Tobacco Stemming and Redrying		
Durham, N. C.	5	1.6
Richmond, Va.	4	1.4
Forsyth, N. C.	6	1.2
Fayette, Ky.	8	1.2
Danville, Va.	6	1.1
Pitt, N. C.	5	.9
Rockingham, N. C.	2	.7
Nash, N. C.	3	.6
Jefferson, Ky.	4	.6
Lenoir, N. C.	5	.5
Halifax, Va.	4	.5
Lancaster, Pa.	9	.4
Gadsden, Fla.	3	.4
Wilson, N. C.	4	.4
Vance, N. C.	1	.4
Norfolk, Va.	1	.4
Granville, N. C.	3	.4
Wayne, N. C.	1	.4
Petersburg, Va.	2	.3
Edgecombe, N. C.	2	.3
Total Above Counties	78	13.7
Industry Total	133	16.5
% of U. S.	58.6	83.0

*Exceeds total due to rounding.

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Manufacture of Textile Mill Products—S.I.C. 22

SM Estimate of 100 Counties with 70.0% of 1957 Employment

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Philadelphia, Pa.	398	27.0	Greenwood, S. C.	10	7.9	Rowan, N. C.	14	5.5	Norfolk, Mass.	50	4.2	Hall, Ga.	6	3.2
Providence, R. I.	275	25.5	Chambers, Ala.	9	7.6	Rockingham, N. C.	16	5.5	York, Me.	7	4.1	Davidson, N. C.	34	3.2
Gaston, N. C.	102	23.3	Lancaster, Pa.	37	7.3	Knox, Tenn.	10	5.4	Whitfield, Ga.	48	4.1	Los Angeles, Cal.	141	3.2
Cabarrus, N. C.	26	20.5	Mecklenberg,			Aiken, S. C.	10	5.3	Burke, N. C.	35	4.1	Orange, N. Y.	15	3.1
Greenville, S. C.	38	18.2	N. C.	52	7.1	Montgomery, Pa.	98	5.3	Talladega, Ala.	10	4.0	McDowell, N. C.	24	3.1
Spartanburg, S. C.	37	18.0	Hillsborough,			Hudson, N. J.	134	5.3	Kent, R. I.	70	4.0	Washington, R. I.	28	3.1
Guilford, N. C.	69	17.7	N. H.	46	6.8	Surry, N. C.	22	5.2	Chattooga, Ga.	7	3.9	Caldwell, N. C.	19	3.0
Bristol, Mass.	125	17.6	Lancaster, S. C.	3	6.7	Walker, Ga.	11	5.2	Chester, S. C.	8	3.9	Lincoln, N. C.	15	3.0
Passaic, N. J.	312	17.2	Hamilton, Tenn.	37	6.7	Berkshire, Mass.	16	5.1	Halifax, N. C.	6	3.9	Madison, Ala.	2	2.9
Anderson, S. C.	35	14.1	Windham, Conn.	31	6.6	Laurens, S. C.	11	5.1	Luzerne, Pa.	39	3.9	Richland, S. C.	3	2.9
Alamance, N. C.	84	12.8	Cook, Ill.	91	6.5	New London,			Cuyahoga, Ohio	33	3.8	Randolph, N. C.	60	2.9
Berks, Pa.	151	12.8	Floyd, Ga.	8	6.4	Conn.	42	5.0	Lehigh, Pa.	72	3.7	Bibb, Ga.	13	2.9
New York, N. Y.	714	11.6	Bergen, N. J.	85	6.4	Tallapoosa, Ala.	9	4.8	Lackawanna, Pa.	29	3.6	Nash, N. C.	7	2.9
Kings, N. Y.	459	11.6	Cleveland, N. C.	28	6.2	Queens, N. Y.	168	4.7	Richmond, N. C.	8	3.5	Tolland, Conn.	21	2.9
Middlesex, Mass.	99	11.1	Montgomery,			Union, S. C.	10	4.7	Calhoun, Ala.	11	3.5	Etowah, Ala.	2	2.8
Worcester, Mass.	120	10.8	N. Y.	14	5.9	Carter, Tenn.	4	4.6	Delaware, Pa.	21	3.5	Newberry, S. C.	5	2.8
Muscogee, Ga.	14	10.7	Androscoggin,			Hartford, Conn.	14	4.6	Durham, N. C.	19	3.4	Henry, Va.	11	2.8
York, S. C.	24	10.1	Me.	14	5.8	Essex, Mass.	42	4.5	Cherokee, S. C.	11	3.4			
Pittsylvania, Va.	3	10.0	Fulton, Ga.	15	5.8	Oconee, S. C.	7	4.5	Richmond, Ga.	9	3.4	Total Above		
Forsyth, N. C.	20	9.2	Spaulding, Ga.	10	5.7	Hampden, Mass.	31	4.5	Essex, N. J.	75	3.4	Counties	5,510	679.5
Catawba, N. C.	112	8.5	Rutherford, N. C.	19	5.7	Upson, Ga.	4	4.4	Pickens, S. C.	11	3.3			
Troup, Ga.	11	8.4	Fairfield, Conn.	70	5.6	Stanly, N. C.	12	4.3	York, Pa.	33	3.3	% of U.S.A. Total	68.3	70.0

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 22

This is one of the biggest of all industry groups, with an extensive breakdown of 33 four-digit categories. As might be expected with so many sub-classifications, the range of gain and decrease is broad—from a 10% dip in product value between 1954 and 1958 for synthetic broad-woven fabrics (4-digit code 2234) to a 61% jump in carpets and rugs except wool.

Overexpansion of plant capacity and price declines in the synthetic broad-woven fabrics industry, particularly in rayon, accounted for the drop in the industry's value of shipments. Most of the newer man-made fibers, such as nylon, orlon and dacron, have experienced strong gains. This is reflected to some extent in the soaring sales of non-wool carpets and rugs, in which mothproofing and the easy removal of spots and stains are strong selling points. The improved adaptability of cotton also has been a stimulating factor.

Increased application of the newer fabrics to the men's and boy's apparel industry likewise served to give that industry an extra fillip in sales.

No significant aggregate figures can be shown for the 3-digit industries or the 2-digit overall industry. **See page 83.**

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	Gross Sales Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
221	*Woolen and Worsted manufactures*					
2211	Scouring and combing plants	74	94	106	7.0	6.2
2212	Yarn mills, wool, except carpet	171	252	267	17.8	14.4
2213	Woolen and worsted fabrics	343	890	970	62.5	60.9
2216	Finishing wool textiles	56	33	36	4.2	3.6
222	*Yarn and thread mills*					
2222	Yarn and throwing mills	137	99	113	11.8	8.9
2223	Thread mills	97	184	190	13.9	11.7
2224	Yarn mills, cotton system	357	1,031	1,278	85.2	82.2
223	*Broad woven fabrics*					
2233	Cotton broad-woven fabrics	582	2,790	2,985	296.2	277.3
2234	Synthetic broad-woven fabrics	575	1,143	1,029	90.0	70.9
2241	Narrow fabric mills	513	250	283	25.7	25.0
225	*Knitting mills*					
2251	Full-fashioned hosiery mills	789	52	495	60.2	52.7
2252	Seamless hosiery mills	609	429	519	63.4	62.6
2253	Knit outerwear mills	1,083	544	734	46.4	52.9
2254	Knit underwear mills	149	256	312	31.3	34.2
2255	Knit gloves and mittens	29	12	14	2.0	2.1
2256	Knit fabric mills	340	376	432	16.8	15.7
2259	Knitting mills, n. e. c.	46	16	16	1.4	1.2
2261	Finishing textiles, except wool	725	988	1,138	79.3	75.2
227	*Carpets and rugs*					
2271	Wool carpets and rugs	98	420	470	30.1	26.5
2273	Carpets and rugs, except wool	213	175	282	11.5	13.6
2274	Hard-surfaced floor coverings	16	182	189	9.6	7.5
228	*Hats, except cloth and millinery*					
2281	Fur-felt hats and hat bodies	91	71	76	8.2	6.6
2282	Wool-felt hats and hat bodies	32	14	15	1.8	1.4
2283	Straw hats	48	22	26	2.3	1.7
2284	Hatter's fur	30	10	11	.8	.7
229	*Miscellaneous textile goods*					
2291	Felt goods, n. e. c.	72	93	109	6.0	5.8
2292	Lace goods	138	60	75	7.4	8.9
2293	Padding and upholstery filling	200	149	168	9.1	8.7
2294	Processed textile waste	203	85	111	5.8	6.0
2295	Coated fabrics, except rubberized	106	212	242	8.5	7.5
2298	Cordage and twine	137	160	168	12.3	10.3
2299	Textile goods, n. e. c.	106	121	131	9.9	7.7

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SM S I C Manufacture of Textile Mill Products—(Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 22

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2211—Scouring and Combing Plant		
Providence, R. I.	12	1.6
Middlesex, Mass.	10	1.4
Worcester, Mass.	8	.8
Philadelphia, Pa.	7	.6
Essex, Mass.	4	.4
Bristol, Mass.	1	.3
Norfolk, Mass.	4	.3
Passaic, N. J.	3	.2
Hampden, Mass.	1	.2
Florence, S. C.	2	.1
Total Above Counties	52	5.9
Industry Total	74	6.2
% of U. S.	70.3	95.2
2212—Yarn Mills, Wool, Except Carpet		
Providence, R. I.	35	4.0
Middlesex, Mass.	8	1.1
Gaston, N. C.	5	.7
McCormick, S. C.	1	.6
Chautauqua, N. Y.	1	.6
Worcester, Mass.	14	.6
Coweta, Ga.	1	.6
Delaware, Pa.	4	.5
Philadelphia, Pa.	11	.5
Hillsborough, N. H.	5	.5
Caldwell, N. C.	1	.3
Multnomah, Ore.	1	.3
Ogle, Ill.	1	.3
Bristol, R. I.	2	.3
Windham, Conn.	1	.3
Berkshire, Mass.	2	.2
Tolland, Conn.	2	.2
Allegheny, Pa.	1	.2
Randolph, N. C.	1	.2
Bradley, Tenn.	1	.1
Total Above Counties	96	12.1
Industry Total	171	14.4
% of U. S.	57.3	84.0
2213—Woolen and Worsted Fabric		
Worcester, Mass.	25	4.8
Surry, N. C.	2	2.6
Providence, R. I.	31	2.5
Passaic, N. J.	6	2.5
Bergen, N. J.	3	2.5
Essex, Mass.	10	2.4
Cuyahoga, Ohio	2	1.6
Albany, N. Y.	1	1.5
Philadelphia, Pa.	24	1.4
Walker, Ga.	1	1.4
Kennebec, Me.	5	1.2
Cheshire, N. H.	5	1.2
Middlesex, Mass.	4	1.0
Tolland, Conn.	7	1.0
Berkshire, Mass.	4	1.0
Norfolk, Mass.	5	1.0
Androscoggin, Me.	4	.9
Strafford, N. H.	5	.9
Penobscot, Me.	6	.8
Windham, Conn.	7	.8
Total Above Counties	157	33.0
Industry Total	343	60.9
% of U. S.	45.8	54.2
2216—Finishing Wool Textiles		
Passaic, N. J.	1	.6
Philadelphia, Pa.	12	.5
Providence, R. I.	7	.4
Portage, Ohio	1	.4
Anderson, S. C.	1	.4
Merrimack, N. H.	1	.4
Kings, N. Y.	6	.3
Bucks, Pa.	1	.2
Campbell, Va.	1	.2
Total Above Counties	31	3.4
Industry Total	56	3.6
% of U. S.	55.4	94.4
2222—Yarn Throwing Mills		
Lackawanna, Pa.	12	1.8
Luzerne, Pa.	9	1.1
Forsyth, N. C.	2	.4
Erie, N. Y.	3	.4
Davidson, N. C.	1	.3
Orange, Va.	1	.3
Passaic, N. J.	8	.3
Philadelphia, Pa.	4	.3
Washington, Tenn.	1	.2
Union, Pa.	2	.2
Lehigh, Pa.	2	.2
Columbia, Pa.	6	.2
Middlesex, Mass.	1	.2
Bradley, Tenn.	1	.2
Anderson, S. C.	1	.2
Guilford, N. C.	1	.2
Providence, R. I.	6	.2
Cook, Ill.	1	.2
Alamance, N. C.	3	.2
Kings, N. Y.	10	.2
Total Above Counties	75	7.3
Industry Total	137	8.9
% of U. S.	54.7	82.0
2223—Thread Mills		
Windham, Conn.	2	1.7
Stephen, Ga.	1	1.1
Gaston, N. C.	5	1.1
Cobb, Ga.	2	.8
Whitfield, Ga.	1	.6
York, S. C.	1	.6
Hamilton, Tenn.	1	.6
Dougherty, Ga.	1	.6
McDowell, N. C.	1	.6
Mitchell, Ga.	1	.4
Haralson, Ga.	1	.3
Cleveland, N. C.	1	.3
New York, N. Y.	23	.3
Sullivan, Tenn.	1	.3
Thomas, Ga.	1	.3
Litchfield, Conn.	1	.3
Queens, N. Y.	2	.3
Providence, R. I.	4	.3
Middlesex, Mass.	4	.3
Berkshire, Mass.	1	.2
Total Above Counties	55	11.0
Industry Total	97	11.7
% of U. S.	56.7	94.0
2224—Yarn Mills, Cotton and Silk System		
Gaston, N. C.	55	14.4
Stanly, N. C.	4	3.7
Upson, Ga.	2	3.3
Rowan, N. C.	8	3.0
Talladega, Ala.	5	2.0
Cleveland, N. C.	12	2.0
Newton, Ga.	2	1.8
Bibb, Ga.	7	1.7
Lincoln, N. C.	7	1.7
Muscogee, Ga.	3	1.7
Troup, Ga.	3	1.7
Calhoun, Ala.	5	1.7
Providence, R. I.	7	1.5
Fairfield, S. C.	1	1.4
Polk, Ga.	3	1.4
Vance, N. C.	2	1.4
Caldwell, N. C.	9	1.3
Scotland, N. C.	3	1.2
Catawba, N. C.	7	1.2
Cumberland, N. C.	6	1.2
Total Above Counties	151	49.3
Industry Total	357	82.2
% of U. S.	42.3	60.0
2233—Cotton Broad-Woven Fabric		
Cabarrus, N. C.	9	18.2
Spartanburg, S. C.	23	14.0
Anderson, S. C.	18	11.4
Danville, Va.	1	9.4
Muscogee, Ga.	5	8.4
Bristol, Mass.	17	7.5
Greenville, S. C.	13	6.0
Guilford, N. C.	5	5.9
Lancaster, S. C.	2	5.3
Chamber, Ala.	4	4.4
Fulton, Ga.	5	4.2
Troup, Ga.	5	4.0
Greenwood, S. C.	4	4.0
Rutherford, N. C.	9	4.0
Androscoggin, Me.	3	3.9
Oconee, S. C.	5	3.8
Spalding, Ga.	4	3.5
Hall, Ga.	3	3.2
Richmond, Ga.	4	3.0
Madison, Ala.	2	2.9
Total Above Counties	139	127.0
Industry Total	582	277.3
% of U. S.	23.9	45.8
2234—Synthetic Broad-Woven Fabrics		
Greenville, S. C.	9	6.6
Bristol, Mass.	24	3.4
Spartanburg, S. C.	3	2.2
Greenwood, S. C.	4	2.2
Rutherford, N. C.	2	1.9
Providence, R. I.	26	1.6
York, Me.	1	1.6
Anderson, S. C.	7	1.5
Luzerne, Pa.	14	1.5
Alamance, N. C.	5	1.5
Cleveland, N. C.	5	1.4
Lehigh, Pa.	25	1.3
Hartford, Conn.	1	1.3
Hillsborough, N. H.	6	1.3
Moore, N. C.	3	1.3
Chamber, Ala.	1	1.2
New London, Conn.	5	1.2
Passaic, N. J.	81	1.2
Middlesex, Mass.	4	1.1
Laurens, S. C.	2	1.1
Total Above Counties	228	36.4
Industry Total	478	70.9
% of U. S.	47.7	51.3
2241—Narrow Fabric Mills		
Philadelphia, Pa.	32	1.4
Passaic, N. J.	45	1.3
New York, N. Y.	68	1.0
Washington, R. I.	5	1.0
Lycoming, Pa.	4	.9
Berks, Pa.	3	.9
Hampshire, Mass.	3	.8
Bristol, Mass.	10	.7
Fairfield, Conn.	7	.6
York, Pa.	7	.5
Washington, Md.	5	.5
Middlesex, Mass.	13	.5
Middlesex, Conn.	4	.5
Monroe, N. Y.	3	.5
Norfolk, Mass.	4	.4
Bergen, N. J.	14	.4
Patrick, Va.	1	.4
Chatham, N. C.	1	.4
Suffolk, Mass.	3	.4
Calhoun, Ala.	2	.3
Total Above Counties	234	13.4
Industry Total	513	25.0
% of U. S.	45.6	53.6
2251—Full-Fashioned Hosiery Mills		
Berks, Pa.	81	4.4
Alamance, N. C.	23	3.4
Randolph, N. C.	26	2.4
Guilford, N. C.	12	2.4
Mecklenberg, N. C.	18	2.4
Philadelphia, Pa.	54	1.9
Montgomery, Pa.	50	1.7
Burke, N. C.	9	1.6
Bucks, Pa.	65	1.3
Northampton, Pa.	5	1.1
Hamilton, Tenn.	6	1.0
Milwaukee, Wis.	4	1.0
Cabarrus, N. C.	6	.9
Muscogee, Ga.	2	.8
Queens, N. Y.	3	.7
Hillsborough, N. H.	2	.6
Smyth, Va.	2	.6
Allen, Ind.	1	.6
Durham, N. C.	6	.5
Chatham, N. C.	2	.5
Total Above Counties	379	29.8
Industry Total	789	52.7
% of U. S.	48.0	56.5
2252—Seamless Hosiery Mills		
Guilford, N. C.	29	5.7
Catawba, N. C.	82	5.0
Forsyth, N. C.	8	2.5
Hamilton, Tenn.	17	2.4
Alamance, N. C.	33	2.3
Berks, Pa.	27	2.3
Davidson, N. C.	23	2.2
Surry, N. C.	11	2.1
Roane, Tenn.	3	2.1
Randolph, N. C.	13	1.9
Burke, N. C.	17	1.5
Loudon, Tenn.	2	1.3
Berkeley, W. Va.	1	1.3
McMinn, Tenn.	14	1.2
DeKalb, Ala.	13	1.2
Carroll, Ga.	12	1.0
Cobb, Ga.	3	1.0
Montgomery, N. C.	8	.8
Philadelphia, Pa.	12	.8
Kankakee, Ill.	1	.7
Total Above Counties	329	39.3
Industry Total	609	62.6
% of U. S.	54.0	62.8
2253—Knit Outerwear Mills		
Kings, N. Y.	253	8.7
New York, N. Y.	225	5.7
Philadelphia, Pa.	66	5.1
Hudson, N. J.	50	2.4
Queens, N. Y.	108	2.2
Cuyahoga, Ohio	14	2.1
Multnomah, Ore.	3	1.4
Montgomery, Pa.	5	1.1
Middlesex, Mass.	7	.9
Hillsborough, N. H.	6	.9
Martinsville, Va.	4	.9
Blair, Pa.	1	.8
Roanoke City, Va.	1	.8
Oneida, N. Y.	1	.8
Tallapoosa, Ala.	1	.8
Bristol, Mass.	3	.7
Lebanon, Pa.	4	.7
Essex, N. J.	13	.7
Schuylkill, Pa.	9	.7

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Manufacture of Textile Mill Products—S.I.C. 22 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Milwaukee, Wis.	[illegible]	.7
Total Above Counties	770	38.1
Industry Total	1,083	52.9
% of U. S.	71.7	72.0

2254—Knit Underwear Mills

Knox, Tenn.	2	3.5
Berks, Pa.	15	2.2
Schuylkill, Pa.	21	1.9
Hennepin, Minn.	1	1.5
Oneida, N. Y.	5	1.4
Lamar, Ga.	1	1.4
Lancaster, Pa.	2	1.0
Rockingham, N. C.	1	.8
Lauderdale, Ala.	1	.8
Miami, Ohio	2	.8
Bradford, Pa.	1	.8
Pike, Miss.	1	.8
Taylor, Ky.	1	.8
Bartow, Ga.	1	.8
Kenosha, Wis.	1	.8
Wyoming, N. Y.	3	.7
Chester, Pa.	4	.6
Hamilton, Tenn.	2	.5
Philadelphia, Pa.	3	.4
Kent, Mich.	1	.4
Total Above Counties	69	21.9
Industry Total	149	34.2
% of U. S.	46.3	64.0

2255—Knit Glove Mills

Warren, N. Y.	1	.5
Outagamie, Wis.	1	.5
Fulton, N. Y.	3	.2
Schenectady, N. Y.	2	.2
Westchester, N. Y.	3	.1
Saratoga, N. Y.	2	.1
Total Above Counties	12	1.6
Industry Total	29	2.1
% of U. S.	41.4	76.2

2256—Knit Fabric Mills

New York, N. Y.	58	.8
Northampton, Pa.	4	.8
Clarke, Ala.	1	.7
Dyer, Tenn.	1	.7
Kings, N. Y.	40	.6
Middlesex, Mass.	5	.5
Philadelphia, Pa.	10	.5
Montgomery, N. Y.	6	.5
Fulton, N. Y.	6	.4
Berks, Pa.	4	.4
Lehigh, Pa.	11	.4
Alamance, N. C.	6	.4
Duplin, N. C.	1	.4
Autauga, Ala.	1	.4
Providence, R. I.	7	.4
Luzerne, Pa.	3	.4
Gaston, N. C.	6	.3
Hampden, N. H.	4	.3
Litchfield, Conn.	1	.3
Warren, N. Y.	2	.3
Total Above Counties	177	9.5
Industry Total	340	15.7
% of U. S.	52.1	60.5

2259—Knitting Mills, N.E.C.

Cook, Ill.	1	.2
Bergen, N. J.	1	.2
Scotland, N. C.	1	.2
Philadelphia, Pa.	4	.1
Albany, N. Y.	4	.1
Total Above Counties	11	.8
Industry Total	46	1.2
% of U. S.	23.9	66.7

2261—Finishing Textiles, Except Wool

Passaic, N. J.	96	7.5
Providence, R. I.	31	5.4
York, S. C.	2	3.0
Bristol, Mass.	26	2.9
Greenville, S. C.	4	2.8
Chamber, Ala.	1	2.4
Philadelphia, Pa.	29	2.3
Bergen, N. J.	19	2.2
Kent, R. I.	8	1.8
New London, Conn.	10	1.7
Aiken, S. C.	4	1.5
New York, N. Y.	110	1.4
Berkshire, Mass.	3	1.1
Kings, N. Y.	48	1.1
Hudson, N. J.	29	1.1
New Castle, Del.	1	1.1
Washington, R. I.	5	1.1
Guilford, N. C.	3	1.0
Hamilton, Tenn.	4	1.0
Warren, N. J.	7	1.0
Total Above Counties	440	43.4
Industry Total	725	75.2
% of U. S.	60.7	57.7

2271—Wool Carpets and Rugs

Montgomery, N. Y.	2	5.1
Philadelphia, Pa.	26	3.6
Hartford, Conn.	2	2.3
Columbia, Pa.	1	1.9
Rockbridge, Va.	1	1.8
Westchester, N. Y.	2	1.6
Cook, Ill.	2	1.2
Montgomery, Pa.	3	1.1
Cumberland, Pa.	1	1.0
Monmouth, N. J.	3	.9
Orange, N. Y.	2	.8
Passaic, N. J.	1	.6
Middlesex, Mass.	1	.6
Washington, Miss.	1	.6
Union, N. J.	1	.6
Mercer, N. J.	2	.5
Worcester, Mass.	6	.4
Cayuga, N. Y.	2	.4
Bucks, Pa.	2	.2
Fresno, Cal.	1	.2
Total Above Counties	82	25.4
Industry Total	98	26.5
% of U. S.	63.3	95.8

2273—Carpets and Rugs, Except Wool

Troup, Ga.	1	2.0
Los Angeles, Cal.	25	.9
Gordon, Ga.	7	.7
Winnebago, Wis.	2	.6
Delaware, Pa.	2	.4
Davidson, Tenn.	1	.2
Walker, Ga.	3	.2
Providence, R. I.	10	.2
Jennings, Ind.	1	.2
Hennepin, Minn.	1	.2
Charlotte, Va.	1	.2
Montgomery, N. C.	1	.2
Greenville, S. C.	1	.2
Catoosa, Ga.	2	.2
Drew, Ark.	1	.2
Polk, Ore.	1	.2
Philadelphia, Pa.	11	.2
Chatooga, Ga.	1	.2
Lackawanna, Pa.	4	.1
Monroe, Tenn.	2	.1
Total Above Counties	78	7.4
Industry Total	213	13.6
% of U. S.	36.6	54.4

2274—Hard-Surface Floor Coverings

Lancaster, Pa.	1	3.2
Norfolk, Mass.	1	.6
Hudson, N. J.	1	.6
Delaware, Pa.	1	.5
Alameda, Cal.	1	.5
Mercer, N. J.	1	.5
New Castle, Del.	1	.3
Salem, N. J.	1	.3
Androscoggin, Me.	1	.2
New London, Conn.	1	.2
Hamilton, Ohio	1	.2
Kennebec, Me.	1	.1
Middlesex, N. J.	1	.1
Lehigh, Pa.	1	.1
Philadelphia, Pa.	1	.1
Total Above Counties	15	7.5
Industry Total	16	7.5
% of U. S.	93.8	100.0

2281—Fur Felt Hats and Hat Bodies

Fairfield, Conn.	18	2.9
Philadelphia, Pa.	2	1.4
Northumberland, Pa.	1	.3
New York, N. Y.	25	.3
Dallas, Tex.	2	.3
Berks, Pa.	3	.2
La Porte, Ind.	1	.2
Franklin, Mo.	1	.2
Essex, N. J.	6	.1
Total Above Counties	59	5.9
Industry Total	91	6.6
% of U. S.	64.8	89.4

2282—Wool Felt Hats and Hat Bodies

Essex, Mass.	1	.5
Lancaster, Pa.	3	.4
Fairfield, Conn.	2	.2
New York, N. Y.	12	.1
Total Above Counties	18	1.2
Industry Total	32	1.4
% of U. S.	56.3	85.7

2283—Straw Hats

St. Louis, Mo.	2	.4
New York, N. Y.	26	.4
Baltimore City, Md.	1	.3
Franklin, Tenn.	1	.2
Webb, Tex.	2	.1
St. Clair, Ill.	2	.1
Total Above Counties	34	1.5
Industry Total	48	1.7
% of U. S.	70.8	88.2

2284—Hatters' Fur

Fairfield, Conn.	18	.3
Essex, N. J.	8	.3
Total Above Counties	26	.6
Industry Total	30	.7
% of U. S.	86.7	85.7

2291—Felt Goods, N.E.C.

Cook, Ill.	7	.7
Vance, N. C.	1	.6
Los Angeles, Cal.	6	.5
Wayne, Mich.	1	.4
Chester, Pa.	1	.4
Orange, N. Y.	1	.4
Essex, N. J.	4	.4
Williamson, Ill.	1	.4
Worcester, Mass.	1	.4
Norfolk, Mass.	2	.3
Fairfield, Conn.	1	.2
Broome, N. Y.	1	.2
Milwaukee, Wis.	1	.2
Norfolk, Va.	1	.2
Racine, Wis.	1	.1
Hampshire, Mass.	1	.1
Philadelphia, Pa.	4	.1
Total Above Counties	36	5.6
Industry Total	72	5.8
% of U. S.	48.6	96.6

2292—Lace Goods

Providence, R. I.	11	1.4
Philadelphia, Pa.	5	1.2
Kent, R. I.	36	1.0
Lackawanna, Pa.	1	.8
Bronx, N. Y.	5	.6
New York, N. Y.	20	.6
Suffolk, N. Y.	3	.5
Passaic, N. J.	8	.5
Washington, R. I.	6	.4
Fairfield, Conn.	2	.4
Bristol, R. I.	2	.2
Lorain, Ohio	1	.2
Middlesex, Conn.	2	.2
Somerset, N. J.	1	.2
Mercer, N. J.	3	.2
Hudson, N. J.	10	.1
Total Above Counties	116	8.5
Industry Total	138	8.9
% of U. S.	84.1	95.5

2293—Paddings and Upholstery Filling

Union, N. J.	2	.7
Cook, Ill.	20	.7
Wayne, Mich.	8	.7
Philadelphia, Pa.	8	.5
Hamilton, Ohio	2	.4
St. Louis, Mo.	2	.4
Richmond, Ga.	1	.4
Genesee, Mich.	1	.4
La Porte, Ind.	2	.4
Mecklenburg, N. C.	2	.4
Dallas, Tex.	4	.3
Providence, R. I.	2	.2
Kings, N. Y.	12	.2
Saratoga, N. Y.	1	.2
Oakland, Mich.	1	.2
Cherokee, S. C.	1	.2
Stark, Ohio	1	.2
Williamson, Tex.	1	.2
Niagara, N. Y.	2	.2
Alameda, Cal.	1	.1
Total Above Counties	74	7.0
Industry Total	200	8.7
% of U. S.	37.0	80.5

2294—Processed Textile Waste

Albany, N. Y.	9	.6
Baltimore City, Md.	6	.4
Philadelphia, Pa.	14	.4
Middlesex, Mass.	9	.3

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SM S I C Manufacture of Textile Mill Products—(Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 22 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Norfolk, Mass.	9	.3
Fulton, Ga.	1	.2
Winona, Minn.	1	.2
Butler, Ohio	1	.2
St. Louis City, Mo.	4	.2
Chamber, Ala.	1	.2
Worcester, Mass.	13	.2
Penobscot, Me.	2	.2
Rensselaer, N. Y.	1	.2
Mecklenberg, N. C.	4	.2
Bristol, Mass.	5	.1
Providence, R. I.	11	.1
Essex, Mass.	5	.1
Greene, Ohio	2	.1
Total Above Counties	98	4.2
Industry Total	203	6.0
% of U. S.	48.3	70.0

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2295—Coated Fabrics, Except Rubberized		
Essex, N. J.	8	1.3
Franklin, Ohio	1	.9
Cook, Ill.	2	.7
Orange, N. Y.	2	.7
Lucas, Ohio	2	.5
Norfolk, Mass.	4	.4
Worcester, Mass.	4	.3
Middlesex, Mass.	6	.3
Westchester, N. Y.	2	.2
Morris, N. J.	2	.2
Chautauqua, N. Y.	1	.2
Wayne, Mich.	1	.2
Kent, R. I.	1	.2
Middlesex, N. J.	2	.2
Dane, Wis.	1	.2
Sullivan, Tenn.	1	.1
Mercer, N. J.	1	.1
Suffolk, Mass.	6	.1

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Providence, R. I.	3	.1
Total Above Counties	50	6.9
Industry Total	106	7.5
% of U. S.	47.2	92.0
2298—Cordage and Twine		
Kings, N. Y.	5	.8
Calhoun, Ala.	2	.8
Cayuga, N. Y.	2	.6
Plymouth, Mass.	1	.6
Newton, Ga.	1	.6
Cortland, N. Y.	3	.5
Orleans, La.	3	.5
Caldwell, N. C.	2	.4
Middlesex, Mass.	2	.3
Kent, Mich.	2	.3
Burlington, N. J.	1	.3
St. Louis City, Mo.	3	.3

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Baltimore City, Md.	1	.3
Hudson, N. J.	2	.3
Jefferson, La.	1	.2
Jefferson, Ky.	1	.2
Clarke, Ga.	1	.2
Greene, Ohio	2	.2
Washington, R. I.	1	.2
Cook, Ill.	4	.2
Total Above Counties	40	7.8
Industry Total	137	10.3
% of U. S.	29.2	75.7
2299—Textile Goods, N.E.C.		
Philadelphia, Pa.	12	1.0
Passaic, N. J.	5	.6
Cook, Ill.	3	.6
Hampden, Mass.	1	.6

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Lehigh, Pa.	1	.3
New Castle, Del.	1	.3
Essex, Mass.	2	.3
Hudson, N. J.	2	.3
York, Pa.	1	.3
Worcester, Mass.	1	.3
Pulaski, Ark.	1	.3
Luzerne, Pa.	1	.2
Sunflower, Miss.	1	.2
Anderson, S. C.	1	.2
Martin, Minn.	1	.2
Gaston, N. C.	2	.2
Providence, R. I.	6	.2
New York, N. Y.	16	.2
Jeff Davis, Ga.	1	.2
Middlesex, Mass.	2	.2
Total Above Counties	61	6.7
Industry Total	108	7.7
% of U. S.	56.5	87.0

Manufacture of Apparel & Related Products—S.I.C. 23

SM Estimates for 100 Counties with 78.3% of 1957 Employment

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
New York, N. Y.	1,716	257.5
Kings, N. Y.	2,217	60.8
Los Angeles, Cal.	1,628	47.2
Philadelphia, Pa.	909	45.6
Cook, Ill.	1,034	38.2
Suffolk, Mass.	680	20.9
Hudson, N. J.	985	20.4
Baltimore, Md.	6	17.5
Bristol, Mass.	188	17.2
Luzerne, Pa.	197	15.8
St. Louis, Mo.	9	15.2
Bronx, N. Y.	572	12.5
Queens, N. Y.	383	11.5
Cuyahoga, Ohio	180	11.1
Monroe, N. Y.	39	10.7
Lackawanna, Pa.	148	10.3
Schuylkill, Pa.	82	10.3
Essex, N. J.	311	10.0
Passaic, N. J.	235	9.7
Northampton, Pa.	129	9.5
Dallas, Tex.	179	9.3
Jackson, Mo.	132	9.1

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Lehigh, Pa.	102	9.0
Hamilton, Ohio	105	7.8
San Francisco, Cal.	332	7.7
Middlesex, N. J.	141	7.7
Fulton, Ga.	85	7.5
Fairfield, Conn.	134	7.2
New Haven, Conn.	154	7.1
Westchester, N. Y.	229	6.4
Middlesex, Mass.	136	6.2
Monmouth, N. J.	96	6.1
Worcester, Mass.	93	6.0
Bergen, N. J.	279	5.8
Union, N. J.	160	5.5
Orleans, La.	57	5.3
Lancaster, Pa.	57	5.3
Rensselaer, N. Y.	38	5.0
Wayne, Mich.	152	5.0
Hennepin, Minn.	112	4.9
York, Pa.	58	4.8
Montgomery, Pa.	70	4.8
Northumberland, Pa.	30	4.5

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Greenville, S. C.	19	4.4
Dade, Fla.	187	4.3
Milwaukee, Wisc.	111	4.3
El Paso, Tex.	14	4.2
Randolph, N. C.	8	4.2
Cumberland, N. J.	42	4.1
Hampden, Mass.	51	4.1
Whitfield, Ga.	43	4.0
Orange, N. Y.	80	4.0
Berks, Pa.	52	3.8
Lebanon, Pa.	37	3.7
Spartanburg, S. C.	8	2.6
Davidson, N. C.	6	3.5
Somerset, N. J.	20	3.5
Dauphin, Pa.	30	3.4
Essex, Mass.	70	3.2
Erie, N. Y.	73	3.2
Bucks, Pa.	33	3.1
Bexar, Tex.	45	3.1
Guilford, N. C.	16	3.0
Atlantic, N. J.	57	2.9
Providence, R. I.	53	2.9

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Cambria, Pa.	13	2.8
Knox, Tenn.	14	2.8
Suffolk, N. Y.	92	2.7
Carbon, Pa.	27	2.7
Henrico, Va.	27	2.6
Lycoming, Pa.	17	2.6
Ramsey, Minn.	41	2.6
Graves, Ky.	3	2.5
Nassau, N. Y.	109	2.5
Ulster, N. Y.	55	2.5
Franklin, Pa.	9	2.5
King, Wash.	88	2.2
Dutchess, N. Y.	44	2.2
Multnomah, Ore.	54	2.2
Monroe, Miss.	7	2.2
Haralson, Ga.	5	2.2
Barrow, Ga.	12	2.2
Columbia, Pa.	23	2.1
Covington, Ala.	6	2.1
Davidson, Tenn.	18	2.1
Hartford, Conn.	42	2.1
Harris, Tex.	56	2.1

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Albany, N. Y.	31	2.0
Gloucester, N. J.	31	2.0
Burlington, N. J.	24	1.9
Lee, Miss.	8	1.9
Campbell, Va.	13	1.9
Henry, Va.	4	1.8
Richmond, N. Y.	66	1.8
Roanoke, Va.	8	1.7
Shelby, Tenn.	36	1.7
Carroll, Md.	11	1.7
Camden, N. J.	43	1.7
Marion, Ind.	34	1.7
Denver, Colo.	53	1.6
Total Above Counties	16,654	956.1
% of U.S.A. Total	53.1	78.3

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 23

With 41 sub-industries in the 4-digit groupings, this too is a giant American industry. It also shows a wide variation in trends from a 1% gain in the suspender and garter industry to a 44% rise in the fabric dress glove field. Included in the apparel industries are three types of establishments: (1) the regular or inside factories, (2) contract factories, and (3) apparel jobbers. The regular factories perform all the usual manufacturing functions within their own plant; the contract factories manufacture apparel from materials owned by others; and apparel jobbers perform the entrepreneurial functions of a manufacturing company, such as buying raw materials, designing and

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Manufacture of Apparel & Related Products—S.I.C. 23 (Cont'd)

SM Estimates for 4-Digit Industries of S.I.C. 23—(Continued)

preparing samples, arranging for the manufacture of the garments and the selling of the finished apparel.

Custom tailors and dressmakers not operating on a factory basis are classified in non-manufacturing industries. Establishments which purchase and resell finished garments but do not perform functions of the apparel jobbers are classified in wholesale trade as wholesalers and dealers. **No significant aggregate figures can be shown for the 3-digit industries or the 2-digit overall industry.** **See page 83.**

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	SM Est. 1957	Employment (thous.) 1954 Census	SM Est. 1957
231	*Men's and boys' suits and coats*					
2311	Men's and boys' suits and coats	1,310	1,141	1,403	119.0	117.3
2312	Suit and coat findings	118	28	33	2.7	2.5
232	*Men's and boys' furnishings*					
2321	Men's dress shirts and nightwear	971	894	1,091	108.3	115.1
2322	Men's and boys' underwear	82	74	98	9.4	10.7
2323	Men's and boys' neckwear	403	100	113	9.5	9.5
2325	Men's and boys' cloth hats	415	57	72	8.1	9.0
2326	Hat and cap materials	63	10	12	.9	1.0
2327	Separate trousers	793	398	494	51.7	57.5
2328	Work shirts	52	38	40	7.0	6.8
2329	Men's and boys' clothing, n. e. c.	1,117	793	912	90.8	86.8
233	*Women's and misses' outerwear*					
2331	Blouses	1,245	376	402	43.0	44.6
2333	Dresses, unit price	4,114	1,455	1,571	143.3	150.1
2334	Dresses, dozen price	892	435	474	54.5	53.4
2337	Women's suits, coats, and skirts	3,204	1,261	1,438	96.0	94.0
2338	Women's neckwear and scarfs	133	27	28	1.7	1.7
2339	Women's outerwear, n. e. c.	710	252	295	25.4	25.1
234	*Women's undergarments*					
2341	Women's and children's underwear	1,352	770	878	73.4	86.7
2342	Corsets and allied garments	491	394	445	38.8	39.8
2351	Millinery	871	173	185	20.2	17.5
236	*Children's outerwear*					
2361	Children's dresses	764	292	318	32.5	34.5
2363	Children's coats	407	172	175	14.4	14.7
2369	Children's outerwear, n. e. c.	812	278	300	30.6	31.8
2371	Fur goods	1,972	226	314	10.0	10.0
238	*Miscellaneous apparel*					
2381	Fabric dress gloves	110	39	56	4.5	4.8
2382	Fabric work gloves	130	66	84	10.1	11.5
2383	Suspenders and garters	47	10	11	.9	.8
2384	Robes and dressing gowns	328	108	134	11.0	12.1
2385	Waterproof outer garments	294	120	133	12.9	11.7
2386	Leather and sheep-lined clothing	153	56	61	5.4	5.2
2387	Belts	503	106	110	12.6	11.2
2388	Handkerchiefs	100	40	42	3.5	3.3
2389	Apparel, n. e. c.	139	27	32	3.5	3.3
239	*Fabricated textiles, n. e. c.*					
2391	Curtains and draperies	716	173	202	14.0	15.2
2392	House furnishings, n. e. c.	1,213	503	583	36.2	34.9
2393	Textile bags	268	221	223	12.1	11.3
2394	Canvas products	1,119	130	135	13.5	12.0
2395	Tucking, pleating, and stitching	491	35	403	6.5	6.3
2396	Trimmings and art goods	836	242	276	17.8	17.6
2397	Schiffli-machine embroideries	601	65	74	5.7	5.8
2398	Embroideries, except Schiffli	926	56	64	10.8	10.9
2399	Textile products, n. e. c.	1,104	201	283	18.0	22.4

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 23—(Cont'd)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2311A—Manufacturers of Men's and Boys' Suits and Coats		
Cook, Ill.	27	8.1
Monroe, N. Y.	5	7.0
Philadelphia, Pa.	41	6.5
New York, N. Y.	90	5.1
Kings, N. Y.	11	4.5
Cuyahoga, Ohio	8	4.3
Baltimore City, Md.	20	2.8
Graves, Ky.	2	2.7
Los Angeles, Cal.	33	2.7
Suffolk, Mass.	34	2.7
St. Louis City, Mo.	10	2.0
Hamilton, Ohio	14	1.6
Orleans, La.	6	1.4
Haralson, Ga.	1	1.3
Bristol, Mass.	7	1.3
Monmouth, N. J.	1	1.0
Erie, N. Y.	7	1.0
Richmond, Va.	1	.7
Northampton, Pa.	1	.7
Queens, N. Y.	2	.7
Total Above Counties	321	58.1
Industry Total	440	68.9
% of U. S.	73.0	84.3

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2311B—Jobbers of Men's and Boys' Suits and Coats		
New York, N. Y.	234	3.2
Baltimore City, Md.	29	1.8
Philadelphia, Pa.	37	1.3
St. Louis City, Mo.	1	.4
Hamilton, Ohio	3	.2
Monroe, N. Y.	2	.2
Cuyahoga, Ohio	1	.2
Cook, Ill.	14	.2
Suffolk, Mass.	15	.1
Total Above Counties	336	7.6
Industry Total	365	8.2
% of U. S.	92.1	92.8

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2311C—Contractors of Men's and Boys' Suits and Coats		
Philadelphia, Pa.	51	6.0
New York, N. Y.	89	4.7
Kings, N. Y.	59	4.2
Baltimore City, Md.	37	2.1
Montgomery, Pa.	9	1.6
Monroe, N. Y.	6	1.2
Cumberland, N. J.	7	1.2
Franklin, Pa.	1	1.0
Passaic, N. J.	13	.9
Carroll, Md.	4	.8
Suffolk, Mass.	21	.8
Boyle, Ky.	1	.7
Carroll, Ga.	1	.7
Frederick, Md.	3	.7
Onondaga, N. Y.	1	.7
Huntingdon, Pa.	1	.7
Lehigh, Pa.	1	.7
Allen, Ind.	1	.7
Staunton, Va.	1	.7
Cook, Ill.	34	.6
Total Above Counties	341	30.7
Industry Total	491	42.3
% of U. S.	69.5	72.5

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2311D—Men's and Boys' Suits and Coats, N.E.C.		
Monroe, N. Y.	1	1.0
New York, N. Y.	2	.5
Cook, Ill.	2	.4
Philadelphia, Pa.	2	.4
Montgomery, Pa.	1	.2
Kings, N. Y.	1	.2
Total Above Counties	9	2.6
Industry Total	14	2.9
% of U. S.	64.3	89.7

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2312—Suit and Coat Findings		
New York, N. Y.	46	.8
Philadelphia, Pa.	17	.5
Baltimore City, Md.	5	.2
Cook, Ill.	8	.2
Luzerne, Pa.	1	.2
Kings, N. Y.	8	.1
Total Above Counties	85	2.0
Industry Total	116	2.5
% of U. S.	73.3	81.5
2321—Men's Dress Shirts and Nightwear		
New York, N. Y.	215	5.4
Los Angeles, Cal.	84	4.5
Schuylkill, Pa.	16	3.0
Luzerne, Pa.	7	2.2
Rensselaer, N. Y.	6	2.1

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SM SIC Manufacture of Apparel & Related Products—(Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 23—(Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Covington, Ala.	2	2.1
Lehigh, Pa.	16	1.9
Northumberland, Pa.	6	1.9
Greenville, S. C.	7	1.7
Baltimore City, Md.	6	1.7
Fulton, Ga.	6	1.7
Bristol, Mass.	8	1.6
Lycoming, Pa.	3	1.5
York, Pa.	9	1.5
White, Tenn.	2	1.3
Spartanburg, S. C.	3	1.3
Ulster, N. Y.	6	1.1
Philadelphia, Pa.	3	1.1
Columbia, Pa.	4	1.1
Geneva, Ala.	2	1.1
Total Above Counties	411	39.8
Industry Total	970	115.1
% of U. S.	42.4	34.6

2322—Men's and Boys' Underwear

Warren, Ky.	1	1.2
Franklin, Ky.	1	.8
Lehigh, Pa.	7	.7
Wilkes-Ga.	1	.6
Johnston, N. C.	1	.6
Richland, S. C.	1	.5
St. Louis, Minn.	1	.5
Bourbon, Ky.	1	.5
Warrick, Ind.	2	.4
Rhea, Tenn.	2	.4
New York, N. Y.	10	.4
Osage, Okla.	1	.4
Chickasaw, Miss.	1	.4
Butler, Ala.	1	.3
Cobb, Ga.	1	.2
Greenwood, S. C.	2	.2
Rowan, N. C.	1	.2
Alleghany, N. C.	1	.2
Washington, Va.	1	.2
Hamilton, Tenn.	1	.2
Total Above Counties	38	8.9
Industry Total	82	10.7
% of U. S.	46.3	83.2

2323—Men's and Boys' Neckwear

New York, N. Y.	182	3.8
Orleans, La.	2	.7
Philadelphia, Pa.	17	.5
Hamilton, Ohio	3	.4
Los Angeles, Cal.	28	.4
Suffolk, Mass.	16	.3
Cook, Ill.	22	.3
Northampton, Pa.	2	.2
Hudson, N. Y.	8	.2
Kings, N. Y.	17	.2
Rensselaer, N. Y.	1	.2
Monroe, N. Y.	3	.2
Baltimore City, Md.	11	.2
New Hanover, N. C.	1	.2
New Haven, Conn.	5	.2
St. Louis City, Mo.	5	.2
Jefferson, Ky.	2	.1
Fairfield, Conn.	2	.1
Total Above Counties	327	8.4
Industry Total	403	9.5
% of U. S.	81.1	88.4

2325—Men's and Boys' Cloth Hats

New York, N. Y.	163	2.7
Cook, Ill.	20	.8
St. Louis City, Mo.	12	.7
Crawford, Mo.	1	.4
Hudson, N. J.	9	.2
Philadelphia, Pa.	16	.2
Union, N. J.	1	.2
Fond du Lac, Wis.	1	.2
Daviess, Mo.	2	.2
Kings, N. Y.	15	.2
Scott, Mo.	1	.2
Suffolk, Mass.	16	.1
Denver, Col.	3	.1
Hennepin, Minn.	8	.1
Jackson, Mo.	5	.1
Jefferson, Ky.	3	.1
Los Angeles, Cal.	16	.1
Total Above Counties	292	6.6
Industry Total	415	9.0
% of U. S.	70.4	73.3

2326—Hat and Cap Materials

New York, N. Y.	49	.8
Total Above Counties	49	.8
Industry Total	63	1.0
% of U. S.	77.8	80.0

2327—Separate Trousers

New York, N. Y.	179	3.2
Bucks, Pa.	16	2.0
Philadelphia, Pa.	50	1.8
Lackawanna, Pa.	9	1.8
Kings, N. Y.	47	1.7
Baltimore City, Md.	34	1.5
Monroe, Miss.	7	1.5
Barrow, Ga.	6	1.4
Northampton, Pa.	8	1.2
Luzerne, Pa.	7	1.0
Greene, Mo.	4	.9
San Diego, Cal.	5	.9
Los Angeles, Cal.	36	.9
Haralson, Ga.	1	.7
Martinsville, Va.	1	.7
Lake, Ind.	3	.7
Fayette, Pa.	3	.7
McDuffen, Ga.	1	.7
Dickson, Tenn.	1	.7
Dallas, Tex.	6	.7
Total Above Counties	424	24.7
Industry Total	798	57.5
% of U. S.	53.1	43.0

2328—Work Shirts

Lawrence, Tenn.	1	.7
Prentiss, Miss.	2	.5
Dickson, Tenn.	1	.5
Henry, Tenn.	1	.5
Floyd, Ind.	1	.4
McCracken, Ky.	1	.4
Chester, Tenn.	1	.4
Henderson, Tenn.	1	.4
Union, Miss.	2	.3
Obion, Tenn.	2	.3
Pontotoc, Miss.	2	.3
Davidson, Tenn.	2	.3
Todd, Ky.	1	.3
Buchanan, Mo.	1	.3
Iredell, N. C.	4	.2
Blair, Pa.	1	.2
Jasper, Mo.	1	.1
Wilson, Tenn.	1	.1
Tippah, Miss.	1	.1
Gibson, Tenn.	1	.1
Total Above Counties	28	6.4
Industry Total	52	6.8
% of U. S.	53.8	94.1

2329—Men's and Boys' Clothing, N.E.C.

Philadelphia, Pa.	74	4.4
New York, N. Y.	143	3.5
El Paso, Tex.	8	2.4
Los Angeles, Cal.	40	1.7
Fulton, Ga.	9	1.4
San Francisco, Cal.	31	1.3
Jackson, Mo.	11	1.3
Cook, Ill.	36	1.3
Kings, N. Y.	49	1.3
Suffolk, Mass.	40	1.1
Lynchburg, Va.	3	1.1
Guilford, N. C.	3	1.0
Luzerne, Pa.	10	.9
Barrow, Ga.	4	.9
Jackson, Ga.	2	.9
Tarrant, Tex.	4	.9
Davidson, Tenn.	3	.9
Mercer, N. J.	4	.9
Sullivan, Tenn.	2	.9
Essex, Mass.	9	.8
Total Above Counties	485	28.9
Industry Total	1,117	86.8
% of U. S.	43.4	33.3

2331—Blouses

New York, N. Y.	383	9.2
Northampton, Pa.	68	3.6
Kings, N. Y.	119	3.1
Los Angeles, Cal.	84	2.4
Philadelphia, Pa.	46	2.2
Bronx, N. Y.	61	1.8
Schuylkill, Pa.	18	1.7
Luzerne, Pa.	16	1.3
Queens, N. Y.	36	1.0
Carbon, Pa.	10	.8
Berks, Pa.	8	.7
Middlesex, N. J.	10	.6
Cook, Ill.	22	.6
Lancaster, Pa.	4	.6
Fairfield, Conn.	11	.6
Suffolk, Mass.	23	.6
Lackawanna, Pa.	10	.6
Lycoming, Pa.	5	.5
Delaware, Pa.	5	.5
Monroe, Pa.	12	.5
Total Above Counties	959	32.9
Industry Total	1,245	44.6
% of U. S.	77.0	73.8

2333—Dresses, Unit Price

New York, N. Y.	1,815	55.3
Kings, N. Y.	356	9.4
Los Angeles, Cal.	211	5.5
Luzerne, Pa.	93	5.2
Bronx, N. Y.	177	4.8
Bristol, Mass.	42	4.6
Cook, Ill.	103	4.4
St. Louis City, Mo.	44	3.2
Suffolk, Mass.	73	3.1
Westchester, N. Y.	81	2.7
Philadelphia, Pa.	60	2.7
Lackawanna, Pa.	43	2.5
Dallas, Tex.	27	2.0
Schuylkill, Pa.	25	2.0
Hudson, N. J.	54	1.9
Queens, N. Y.	71	1.9
New Haven, Conn.	37	1.8
Essex, N. J.	45	1.4
Bergen, N. J.	54	1.3
Middlesex, N. J.	27	1.3
Total Above Counties	3,438	117.0
Industry Total	4,114	150.1
% of U. S.	83.6	77.9

2334—Dresses, Dozen Price

New York, N. Y.	145	3.7
Bristol, Mass.	24	2.3
Philadelphia, Pa.	48	1.9
Cook, Ill.	34	1.6
Cuyahoga, Ohio	11	1.4
St. Louis City, Mo.	24	1.5
Roanoke, Va.	3	1.2
Northumberland, Pa.	5	1.2
Jackson, Mo.	9	1.1
Lackawanna, Pa.	18	1.0
Schuylkill, Pa.	5	1.0
Macon, Ill.	7	.9
Baltimore City, Md.	13	.9
Kane, Ill.	3	.8
Florence, S. C.	3	.8
Los Angeles, Cal.	42	.8
Hamilton, Ohio	2	.7
Cambria, Pa.	1	.7
Kings, N. Y.	38	.6
Suffolk, Mass.	14	.6
Total Above Counties	449	24.7
Industry Total	892	53.4
% of U. S.	50.3	46.3

2337—Women's Suits, Coats and Skirts

New York, N. Y.	1,348	28.7
Kings, N. Y.	455	9.1
Los Angeles, Cal.	233	6.1
Suffolk, Mass.	115	3.5
Hudson, N. J.	80	2.7
Jackson, Mo.	26	2.5
Passaic, N. J.	60	2.3
Cook, Ill.	82	2.2
Essex, N. J.	46	1.9
Dallas, Tex.	21	1.5
San Francisco, Cal.	37	1.5
Baltimore City, Md.	19	1.4
Philadelphia, Pa.	42	1.2
Bronx, N. Y.	54	1.2
Orange, N. Y.	22	1.1
Queens, N. Y.	37	.9
Atlantic, N. J.	15	.8
Bergen, N. J.	26	.8
Cuyahoga, Ohio	17	.8
Cumberland, N. J.	8	.8
Total Above Counties	2,743	71.0
Industry Total	3,204	94.9
% of U. S.	85.6	75.5

2338—Women's Neckwear and Scarfs

New York, N. Y.	88	1.2
Hudson, N. J.	3	.1
Total Above Counties	91	1.3
Industry Total	133	1.7
% of U. S.	68.4	76.5

2339—Women's Outerwear, N.E.C.

Los Angeles, Cal.	85	4.0
Kings, N. Y.	81	1.9
Suffolk, Mass.	37	1.0
San Francisco, Cal.	19	.7
Dallas, Tex.	8	.6
Baltimore City, Md.	5	.6
Dade, Fla.	9	.5
Hamilton, Ohio	4	.5
Bronx, N. Y.	16	.5

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The South Leads—Two to One!

Southern Garment Plants Average More Than Double the Purchases of Materials and Supplies of Plants in Other Sections . . .
—Based on 1954 Census of Manufacturers, Published in 1957—

Number of Southern Plants—2,248
Yearly Production—$2,016,459,000

Purchases by Southern Plants
Yearly Materials and Supplies: $1,110,678,000
New Equipment, etc.: $20,975,000

In Plant Production, Southern Plants More than Double Nation's Average

SOUTH
For the South, Average Plant Production—$892,552
Average Plant Buys Material and Supplies—$494,070

NATION
Rest of Nation, Average Plant Production—$386,479
Average Plant Buys Material and Supplies—$244,823

From 1947 to 1954 Production in Southern Plants increased 62%
Purchases by Southern Plants during this period increased 62½%
Both these rates of increase have gone further upward since then!

The 1954 Census of Manufacturers showed a total of 24,094 Apparel Plants in U. S. National Publication "A" showed only 5,336 on statement of Dec. 31, 1957. What important segment of the market was left uncovered? Southern Garment Manufacturer, a "home section" publication, gives saturation coverage of these Southern Plants with yearly averages double importance of nation's average . . . No other publication can match this vital and growing market.

Southern Garment Manufacturer

Published by Ernest H. Abernethy Publishing Co., (Established 1925) 75 Third St., N.W., Atlanta 8, Ga.

Manufacture of Apparel & Related Products—S.I.C. 23 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 23—(Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Lehigh, Pa.	7	.5
Caldwell, N. C.	1	.4
Queens, N. Y.	19	.4
Buncombe, N. C.	2	.4
Clark, Wash.	1	.4
Multnomah, Ore.	3	.4
Rensselaer, N. Y.	1	.4
Luzerne, Pa.	2	.4
Sonoma, Cal.	2	.3
Middlesex, N. J.	9	.3
Hudson, N. J.	12	.3
Total Above Counties	323	14.5
Industry Total	710	25.1
% of U. S.	45.5	57.8

2341—Women's and Childrens' Underwear

New York, N. Y.	572	17.4
Kings, N. Y.	121	4.3
Bristol, Mass.	14	3.0
Lancaster, Pa.	22	2.3
Lehigh, Pa.	19	1.8
Cook, Ill.	27	1.7
Montgomery, N. C.	1	1.4
Los Angeles, Cal.	34	1.4
Hampden, Mass.	6	1.4
Greenville, S. C.	4	1.3
New Haven, Conn.	8	1.2
Hudson, N. J.	26	1.2
Berks, Pa.	12	1.1
Northampton, Pa.	8	1.1
Lebanon, Pa.	9	1.1
St. Louis City, Mo.	7	1.0
Guilford, N. C.	5	.8
Pittsburg, Okla.	1	.8
Schuylkill, Pa.	3	.8
Monroe, Ala.	1	.8
Total Above Counties	900	45.9
Industry Total	1,352	86.7
% of U. S.	66.6	52.9

2342—Corsets and Allied Garments

New York, N. Y.	152	7.8
Cook, Ill.	19	2.3
Los Angeles, Cal.	46	2.1
Hudson, N. J.	18	2.1
Fairfield, Conn.	13	1.6
Queens, N. Y.	13	1.4
Luzerne, Pa.	5	1.3
Cortland, N. Y.	8	1.2
Kings, N. Y.	34	1.1
Fulton, Ga.	4	.8
Essex, N. J.	8	.8
Worcester, Mass.	5	.8
Morris, N. J.	4	.8
Kent, Del.	1	.7
Mercer, W. Va.	1	.7
New Haven, Conn.	12	.7
Cambria, Pa.	3	.7
Bergen, N. J.	10	.6
Cass, Ind.	1	.4
Cabell, W. Va.	1	.4
Total Above Counties	358	28.3
Industry Total	491	39.8
% of U. S.	72.9	71.1

2351—Millinery

New York, N. Y.	574	9.4
Cook, Ill.	42	1.1
Middlesex, Mass.	1	.6
Worcester, Mass.	5	.6
Hampden, Mass.	4	.5
Philadelphia, Pa.	18	.5
Kings, N. Y.	28	.4
Passaic, N. J.	1	.4
Dallas, Tex.	19	.4
Westchester, N. Y.	13	.3
St. Louis City, Mo.	15	.3
Dutchess, N. Y.	3	.3
Los Angeles, Cal.	32	.3
Baltimore City, Md.	5	.3
Milwaukee, Wis.	2	.3
Erie, N. Y.	4	.2
Bronx, N. Y.	11	.2
Fairfield, Conn.	5	.2
Norfolk, Mass.	3	.2
Fulton, Ga.	3	.2
Total Above Counties	788	16.7
Industry Total	871	17.5
% of U. S.	90.5	95.4

2361—Children's Dresses

New York, N. Y.	221	7.4
Philadelphia, Pa.	36	3.2
Lackawanna, Pa.	21	1.6
Luzerne, Pa.	11	1.6
Hudson, N. J.	34	1.4
Los Angeles, Cal.	46	1.3
Kings, N. Y.	54	1.1
Carbon, Pa.	5	1.0
Essex, N. J.	26	.8
Montgomery, Pa.	7	.8
Lancaster, Pa.	8	.7
York, Pa.	8	.7
Bexar, Tex.	6	.7
Appomattox, Va.	3	.6
Dauphin, Pa.	3	.5
Bristol, Pa.	8	.5
Union, N. J.	5	.4
Guilford, N. C.	1	.4
Monmouth, N. J.	7	.3
Webb, Tex.	5	.3
Total Above Counties	515	25.2
Industry Total	764	34.5
% of U. S.	67.4	73.0

2363—Children's Coats

New York, N. Y.	179	4.7
Philadelphia, Pa.	22	1.1
Passaic, N. J.	22	.9

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SM SIC Manufacture of Apparel & Related Products—(Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 23—(Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Kings, N. Y.	39	.8
Lancaster, Pa.	5	.8
Middlesex, N. J.	7	.6
Lackawanna, Pa.	6	.5
Manistee, Mich.	2	.4
Bergen, N. J.	12	.4
Hennepin, Minn.	3	.3
Queens, N. Y.	8	.2
Rowan, N. C.	1	.2
Westmoreland, Pa.	1	.2
Monmouth, N. J.	2	.2
Atlantic, N. J.	2	.2
Hartford, Conn.	1	.2
Chittenden, Vt.	1	.2
Hampden, Mass.	2	.2
Essex, N. J.	6	.2
Cobb, Ga.	1	.2
Total Above Counties	322	12.5
Industry Total	407	14.7
% of U. S.	79.1	85.0

2369—Children's Outerwear, N.E.C.

New York, N. Y.	307	8.0
Kings, N. Y.	96	2.3
Los Angeles, Cal.	42	1.2
Philadelphia, Pa.	24	.9
Providence, R. I.	4	.8
Queens, N. Y.	19	.8
Guilford, N. C.	1	.7
Lehigh, Pa.	9	.7
Lynchburg, Va.	4	.7
Ulster, N. Y.	4	.5
Bexar, Tex.	3	.4
Carter, Ky.	1	.4
Wood, W. Va.	1	.4
Knox, Ill.	1	.4
Dauphin, Pa.	1	.4
Ramsey, Minn.	3	.4
Cook, Ill.	8	.4
Bronx, N. Y.	12	.3
Suffolk, N. Y.	7	.3
Luzerne, Pa.	7	.3
Total Above Counties	554	20.4
Industry Total	812	31.8
% of U. S.	68.2	64.2

2371—Fur Goods

New York, N. Y.	1,722	8.8
Cook, Ill.	60	.3
Los Angeles, Cal.	49	.2
Fulton, N. Y.	14	.1
Philadelphia, Pa.	15	.1
Total Above Counties	1,860	9.4
Industry Total	1,972	10.0
% of U. S.	94.3	94.0

2381—Fabric Dress Gloves

Fulton, N. Y.	18	.9
Montgomery, N. Y.	9	.6
New York, N. Y.	32	.5
Kings, N. Y.	11	.4
Chautauqua, N. Y.	1	.4
Cook, Ill.	2	.2
Lackawanna, Pa.	1	.2
Caledonia, Vt.	1	.2
Christian, Ill.	1	.2
Haywood, Tenn.	1	.2
Waupaca, Wis.	1	.2
Tioga, Pa.	3	.1
Total Above Counties	81	4.1
Industry Total	110	4.8
% of U. S.	73.6	85.1

2382—Fabric Work Gloves

Catawba, N. C.	4	1.2
Butler, Ala.	1	.8
Wayne, Miss.	1	.5
Massac, Ill.	1	.5
Meshoba, Miss.	1	.5
Jackson, Ill.	1	.5
Marion, Ind.	2	.4
Essex, N. J.	4	.4
Knox, Tenn.	1	.2
Jefferson, Iowa	1	.2
Effingham, Ill.	1	.2
Hancock, Ohio	1	.2
Peoria, Ill.	1	.2
Livingston, Mo.	2	.2
Leavenworth, Kan.	1	.2
Floyd, Ga.	1	.2
Chickasaw, Miss.	1	.2
Webster, Miss.	1	.2
Morgan, Col.	1	.2
Grant, Ind.	1	.2
Total Above Counties	28	7.2
Industry Total	130	11.5
% of U. S.	21.5	62.6

2383—Suspenders and Garters

New York, N. Y.	22	.4
Rockingham, N. C.	1	.2
Total Above Counties	23	.6
Industry Total	47	.8
% of U. S.	48.9	75.0

2384—Robes and Dressing Gowns

New York, N. Y.	125	3.4
Kings, N. Y.	70	1.6
Bristol, Mass.	7	.7
Whitfield, Ga.	5	.7
Cook, Ill.	11	.5
Schuylkill, Pa.	3	.5
Cumberland, Pa.	2	.3
Los Angeles, Cal.	5	.2
Hudson, N. J.	7	.2
Fairfield, Conn.	6	.2
Providence, R. I.	2	.2
Berkshire, Mass.	1	.2
Bronx, N. Y.	10	.2
Burke, Ga.	1	.2
Calhoun, Ala.	1	.2
Westchester, N.Y	4	.2
Greenwood, S. C.	2	.2
Lycoming, Pa.	2	.2
Orange, N. Y.	3	.1
Middlesex, N. J.	2	.1
Total Above Counties	269	10.1
Industry Total	328	12.1
% of U. S.	82.0	83.5

2385—Waterproof Outer Garments

New York, N. Y.	104	2.7
Suffolk, Mass.	16	1.4
Kings, N. Y.	32	1.2
Racine, Wis.	2	.6
Kent, Del.	1	.6
Middlesex, Mass.	9	.5
Daviess, Ind.	1	.4
Berrien, Mich.	1	.4
Bronx, N. Y.	5	.3
Fulton, Ga.	3	.3
Baltimore City, Md.	1	.2
Pulaski, Va.	1	.2
Broome, N. Y.	1	.2
Lancaster, Pa.	1	.2
Wilkes, Ga.	1	.2
Lehigh, Pa.	2	.1
Mahoning, Ohio	1	.1
Philadelphia, Pa.	5	.1
Queens, N. Y.	3	.1
Cuyahoga, Ohio	2	.1
Total Above Counties	192	9.9
Industry Total	294	11.7
% of U. S.	65.3	84.6

2386—Leather and Sheep Lined Clothing

Los Angeles, Cal.	16	.7
Philadelphia, Pa.	3	.4
Suffolk, Mass.	10	.4
Essex, Mass.	7	.4
New York, N. Y.	24	.4
Ramsey, Minn.	2	.2
Milwaukee, Wis.	4	.2
Monmouth, N. J.	2	.2
Cook, Ill.	8	.2
Dauphin, Pa.	1	.2
Middlesex, N. J.	4	.2
Fairfield, Conn.	4	.2
Hudson, N. J.	2	.1
Fulton, N. Y.	3	.1
Kings, N. Y.	6	.1
St. Louis City, Mo.	5	.1
Total Above Counties	101	4.1
Industry Total	153	5.2
% of U. S.	66.0	78.8

2387—Belts

New York, N. Y.	305	5.4
Monroe, N. Y.	1	.6
Cook, Ill.	20	.5
Los Angeles, Cal.	30	.5
Hudson, N. J.	6	.5
Philadelphia, Pa.	13	.4
Delaware, Pa.	1	.4
De Witt, Tex.	1	.4
Suffolk, Mass.	7	.3
Luzerne, Pa.	5	.3
Cuyahoga, Ohio	1	.2
Middlesex, Mass.	1	.2
Dallas, Tex.	5	.1
Wayne, N. Y.	1	.1
Total Above Counties	397	9.9
Industry Total	503	11.2
% of U. S.	78.9	88.4

2388—Handkerchiefs

New York, N. Y.	44	.9
Passaic, N. J.	13	.6
Hudson, N. J.	4	.2
Northampton, Pa.	1	.2
Kings, N. Y.	6	.2
Lebanon, Pa.	2	.2
Bristol, Mass.	1	.2
Rensselaer, N. Y.	1	.2
Greenville, S. C.	2	.1
Total Above Counties	74	2.8
Industry Total	100	3.3
% of U. S.	74.0	84.8

2389—Apparel, N.E.C.

New York, N. Y.	43	.9
Huron, Ohio	1	.4
Cook, Ill.	8	.3
Fairfield, Conn.	1	.2
Washington, Pa.	1	.2
Bond, Ill.	1	.2
Los Angeles, Cal.	8	.2
Montgomery, Pa.	3	.1
Champaign, Ill.	1	.1
Philadelphia, Pa.	6	.1
Total Above Counties	73	2.7
Industry Total	139	3.3
% of U. S.	52.5	81.8

2391—Curtains and Draperies

New York, N. Y.	175	2.7
Bristol, Mass.	16	2.2
Los Angeles, Cal.	55	1.0
Cook, Ill.	63	.8
Philadelphia, Pa.	24	.7
Suffolk, Mass.	31	.7
San Francisco, Cal.	18	.4
Westchester, N. Y.	5	.4
Queens, N. Y.	7	.4
Passaic, N. J.	5	.4
Dallas, Tex.	5	.3
St. Louis City, Mo.	9	.3
Kings, N. Y.	29	.3
Allegheny, Pa.	14	.3
Bronx, N. Y.	12	.3
Hampden, Mass.	3	.3
Windham, Conn.	3	.3
Middlesex, N. J.	1	.2
Dutchess, N. Y.	1	.2
New London, Conn.	1	.2
Total Above Counties	477	12.4
Industry Total	716	15.2
% of U. S.	66.6	81.6

2392—Housefurnishing, N.E.C.

New York, N. Y.	276	4.9
Whitfield, Ga.	35	2.4
Cook, Ill.	82	2.2
Kings, N. Y.	118	2.2
Spartanburg, S. C.	1	2.1
Baltimore City, Md.	17	1.2
Los Angeles, Cal.	59	.9
Richmond City, Va.	6	.9
Gordon, Ga.	10	.8
Rockingham, N. C.	1	.7
Philadelphia, Pa.	44	.7
Androscoggin, Me.	1	.7
Hudson, N. J.	17	.6
Bronx, N. Y.	34	.6
Lehigh, Pa.	4	.6
Essex, N. J.	20	.5
Bristol, Mass.	7	.4
Hamilton, Tenn.	2	.4
Chambers, Ala.	1	.4
Rutherford, N. C.	1	.4
Total Above Counties	736	23.6
Industry Total	1,214	34.9
% of U. S.	60.6	67.6

2393—Textile Bags

Harris, Tex.	3	.7
Kings, N. Y.	26	.6
Hennepin, Minn.	7	.6
Orleans, La.	7	.6
Jackson, Mo.	5	.5
Erie, N. Y.	6	.5
Los Angeles, Cal.	6	.4
San Francisco, Cal.	4	.4
Multnomah, Ore.	4	.4
New York, N. Y.	3	.4
Douglas, Neb.	1	.4
Marion, Ind.	1	.4
Dallas, Tex.	4	.3
Shelby, Tenn.	4	.3
Cook, Ill.	13	.3
St. Louis City, Mo.	4	.3
Richmond City, Va.	3	.3
Milwaukee, Wis.	1	.2

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Manufacture of Apparel & Related Products—S.I.C. 23 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 23—(Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Norfolk, Va.	3	.2
Philadelphia, Pa.	5	.2
Total Above Counties	130	8.0
Industry Total	268	11.3
% of U. S.	48.5	70.8

2394—Canvas Products

Cook, Ill.	57	.7
Cuyahoga, Ohio	14	.4
Philadelphia, Pa.	30	.4
Knox, Tenn.	4	.3
Los Angeles, Cal.	35	.3
Kings, N. Y.	32	.3
Lucas, Ohio	7	.3
New York, N. Y.	41	.2
Jackson, Mo.	15	.2
St. Louis City, Mo.	20	.2
Fulton, Ga.	9	.2
Richmond City, Va.	7	.2
Vanderbilt, Ind.	1	.2
Howard, Md.	1	.2
Marion, Ind.	9	.2
Norfolk, Va.	8	.2
Huntington, Ind.	1	.2
Queens, N. Y.	13	.2
Allegheny, Pa.	14	.2
Cabell, W. Va.	2	.2
Total Above Counties	321	5.5
Industry Total	1,119	12.0
% of U. S.	28.7	45.8

2395—Tucking, Pleating and Stitching

New York, N. Y.	278	3.9
Los Angeles, Cal.	29	.5
Hudson, N. J.	42	.5
Kings, N. Y.	21	.2
Suffolk, Mass.	12	.2
Cook, Ill.	19	.2
Philadelphia, Pa.	12	.1
Total Above Counties	413	5.8
Industry Total	491	6.3
% of U. S.	84.1	88.9

2396—Trimmings and Art Goods

New York, N. Y.	482	7.9
Wayne, Mich.	10	1.1
Los Angeles, Cal.	39	.8
St. Louis City, Mo.	12	.7
Worcester, Mass.	4	.7
Hancock, Ohio	1	.7
Kings, N. Y.	53	.5
Cook, Ill.	28	.4
Lycoming, Pa.	1	.4
Philadelphia, Pa.	11	.3
Suffolk, Mass.	13	.3
Alameda, Cal.	1	.2
Randolph, Ind.	1	.2
Bronx, N. Y.	21	.2
New Haven, Conn.	3	.2
Herkimer, N. Y.	1	.2
Albany, N. Y.	1	.2
Wyoming, N. Y.	1	.2
Hudson, N. J.	18	.2
Monterey, Cal.	1	.2
Total Above Counties	700	15.6
Industry Total	838	17.6
% of U. S.	83.7	88.6

2397—Schiffli-Machine Embroideries

Hudson, N. Y.	424	3.8
New York, N. Y.	52	.6
Bergen, N. J.	58	.6
Cook, Ill.	8	.2
Philadelphia, Pa.	5	.1
Total Above Counties	547	5.3
Industry Total	601	5.8
% of U. S.	91.0	91.4

2398—Embroideries, Except Schiffli

New York, N. Y.	428	5.9
Hudson, N. J.	127	.9
Los Angeles, Cal.	45	.6
Kings, N. Y.	33	.4
Bronx, N. Y.	25	.4
Passaic, N. J.	23	.3
Cook, Ill.	19	.3
Bergen, N. J.	35	.3
Middlesex, N. J.	18	.3
Philadelphia, Pa.	17	.3
Queens, N. Y.	13	.2
Baltimore City, Md.	5	.2
St. Louis City, Mo.	9	.1
Dade, Fla.	5	.1
Suffolk, Mass.	14	.1
Total Above Counties	819	10.4
Industry Total	926	10.9
% of U. S.	88.4	95.4

2399—Textile Products, N.E.C.

New York, N. Y.	154	2.9
Cook, Ill.	57	1.4
Kings, N. Y.	74	1.3
Los Angeles, Cal.	93	1.3
Philadelphia, Pa.	42	.7
Essex, Mass.	9	.6
Sandusky, Ohio	1	.6
Alpena, Mich.	1	.5
Queens, N. Y.	21	.5
Fairfield, Conn.	3	.5
Black Hawk, Iowa	2	.5
Bronx, N. Y.	29	.5
Shelby, Tenn.	5	.4
Westchester, N. Y.	11	.3
Wayne, Mich.	18	.3
Suffolk, Mass.	18	.3
Montgomery, Pa.	2	.2
Hamilton, Ohio	9	.2
Berks, Pa.	3	.2
Kent, R. I.	1	.2
Total Above Counties	568	13.9
Industry Total	1,104	22.4
% of U. S.	51.4	62.1

Manufacture of Lumber & Wood Products—S.I.C. 24

SM Estimate of 100 Counties with 40.5% of 1957 Employment

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Humboldt, Cal.	432	11.8
Lane, Ore.	581	11.0
Douglas, Ore.	512	8.6
Cook, Ill.	307	8.0
Los Angeles, Cal.	487	7.5
Multnomah, Ore.	134	7.4
Coos, Ore.	258	5.7
Cowlitz, Wash.	120	5.5
Linn, Ore.	207	5.3
King, Wash.	188	5.1
Mendocino, Cal.	235	5.1
Grays Harbor, Wash.	155	5.1
Snohomish, Wash.	168	5.1
Shelby, Tenn.	63	5.0
Pierce, Wash.	141	4.8
Jackson, Ore.	208	3.8
Klamath, Ore.	45	3.4
Siskiyou, Cal.	72	3.3
Jefferson, Ky.	48	2.9
Oxford, Me.	227	2.9
Somerset, Me.	185	2.9
Shasta, Cal.	94	2.7
Penobscot, Me.	243	2.5
New York County, N. Y.	229	2.4
Lewis, Wash.	175	2.3
Wayne, Mich.	98	2.3
Lincoln, Ore.	172	2.2
Sonoma, Cal.	101	2.2
Del Norte, Cal.	70	2.1
Tillamook, Ore.	151	2.1
Rapides, La.	45	2.1
Clackamas, Ore.	210	2.1
Spokane, Wash.	65	2.1
Clallam, Wash.	99	2.1
Polk, Ore.	92	2.1
Aroostook, Me.	139	2.0
Thurston, Wash.	74	2.0
Kings, N. Y.	176	2.0
Floyd, Ind.	17	1.9
Josephine, Ore.	185	1.9
Bradley, Ark.	22	1.9
Tuscaloosa, Ala.	57	1.9
Marion, Ore.	134	1.8
Fulton, Ga.	74	1.8
Norfolk, Va.	30	1.8
Chatham, Ga.	40	1.8
Dubuque, Iowa	13	1.8
Nez Perce, Idaho	16	1.7
Franklin, Me.	134	1.7
Baltimore, Md.	26	1.6
Winnebago, Wis.	12	1.6
Grafton, N. H.	83	1.6
Mobile, Ala.	53	1.6
Tangipahoa, La.	29	1.6
Iredell, N. C.	34	1.6
Clearwater, Idaho	59	1.6
Kootenai, Idaho	53	1.6
Clatsop, Ore.	66	1.6
Harris, Tex.	68	1.6
Queens, N. Y.	70	1.6
Tippecanoe, Ind.		1.6
Missoula, Mont.	49	1.5
Lassen, Cal.	11	1.5
Henrico, Va.	37	1.5
Columbia, Ore.	88	1.5
Butte, Cal.	54	1.5
Ashley, Ark.	34	1.5
Orangeburg, S. C.	49	1.5
Benton, Ore.	123	1.5
Washington, Ore.	128	1.5
Pascataquis, Me.	128	1.5
Pulaski, Ark.	35	1.5
Marathon, Wis.	33	1.5
Jefferson, Ala.	66	1.5
Bibb, Ga.	31	1.5
Whatcom, Wash.	77	1.5
Montgomery, Ala.	70	1.4
Angelina, Tex.	30	1.4
Lee, N. C.	51	1.4
Plumas, Cal.	35	1.4
Skagit, Wash.	88	1.4
Wood, Wis.	15	1.4
Philadelphia, Pa.	91	1.4
Idaho, Idaho	41	1.3
Catawba, N. C.	36	1.3
St. Louis, Mo.	22	1.3
Umatilla, Ore.	28	1.3
Bonner, Idaho	46	1.3
Hennepin, Minn.	55	1.3
Curry, Ore.	118	1.3
Mason, Wash.	66	1.3
Lincoln, Mont.	69	1.3
Union, Ark.	37	1.3
Bowie, Tex.	24	1.3
Kent, Mich.	51	1.2
Yamhill, Ore.	121	1.2
Dallas, Ala.	32	1.2
Escambia, Ala.	33	1.2
San Joaquin, Cal.	23	1.2
Hamilton, Tenn.	36	1.2
Total Above Counties	10,447	250.5
% of U.S.A. Total	25.2	40.5

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SM S.I.C. Manufacture of Lumber & Wood Products (Cont'd)

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 24

This major group, with its 18 four-digit classifications, includes logging camps engaged in cutting timber and pulpwood, merchant saw mills, lath mills, shingle mills, cooperage stock mills, planing mills, and plywood mills and veneer mills engaged in producing lumber and wood basic materials, as well as establishments engaged in manufacturing finished articles made entirely or mainly of wood or wood substitutes.

Certain types of establishments producing wood products are classified elsewhere. For example, furniture and office and store fixtures are classified in S.I.C. 25. Woodwork in connection with construction, in the nature of reconditioning and repair, or performed to individual order, is classified in non-manufacturing industries. Though cigar boxes (4-digit code 2443) were up only 1% in the 1954-58 interval, wood preserving (code 2491) showed a strong gain of 45% due to the increased protection of wood against the elements and insects. **No significant aggregate figures can be shown for the 3-digit industries or the 2-digit overall industry.** **See page 83**

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	Gross Sales Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
2411	Logging camps and contractors	12,865	733	858	75.5	69.8
242	*Lumber and basic products*					
2421	Sawmills and planing mills	19,778	3,247	3,604	321.2	303.8
2422	Veneer mills	261	121	151	12.8	12.4
2423	Shingle mills	175	34	39	2.5	2.6
2424	Cooperage stocks mills	205	27	30	3.4	2.8
2425	Excelsior mills	68	12	13	1.4	1.4
243	*Millwork and related products*					
2431	Millwork plants	3,348	873	908	68.7	65.9
2432	Plywood plants	255	515	603	39.2	43.8
2433	Prefabricated wood products	231	224	255	11.5	10.7
244	*Wooden containers*					
2441	Fruit and vegetable baskets	134	31	36	6.7	6.3
2442	Rattan and willow ware	75	11	13	1.3	1.3
2443	Cigar boxes	23	8	8	1.1	1.0
2444	Wooden boxes	1,101	352	359	39.5	35.7
2445	Cooperage	180	60	74	3.7	3.4
249	*Miscellaneous wood products*					
2491	Wood preserving	288	191	277	12.1	14.7
2492	Lasts and related products	51	12	14	1.5	1.4
2493	Mirror and picture frames	343	48	50	5.2	4.1
2499	Wood products, n. e. c.	2,103	330	442	38.6	37.6

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 24

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2411—Logging Camps and Logging Contractors		
Douglas, Ore.	346	2.1
Humboldt, Cal.	234	1.8
Lane, Ore.	336	1.8
Penobscot, Me.	184	1.3
Grays Harbor, Wash.	90	1.2
Somerset, Me.	135	1.1
Linn, Ore.	113	1.0
Coos, Ore.	147	1.0
Jackson, Ore.	132	.7
Oxford, Me.	146	.7
Tillamook, Ore.	105	.7
Aroostook, Me.	100	.7
Mendocino, Cal.	119	.7
Clallam, Wash.	77	.6
St. Louis, Minn.	126	.6
Lewis, Wash.	97	.6
Piscataquis, Me.	95	.5
Coos, N. H.	53	.5
Clackamas, Ore.	91	.5
Josephine, Ore.	120	.5
Total Above Counties	2,846	18.6
Industry Total	12,865	69.8
% of U. S.	22.1	26.6

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2421—Sawmills and Planing Mill		
Humboldt, Cal.	177	6.3
Lane, Ore.	201	6.3
Douglas, Ore.	140	3.9
Mendocino, Cal.	104	3.6
Cowlitz, Wash.	26	3.5
Coos, Ore.	98	3.1
Shelby, Tenn.	22	2.7
Jackson, Ore.	60	2.7
Snohomish, Wash.	56	2.4
King, Wash.	39	2.4
Klamath, Ore.	17	2.2
Siskiyou, Cal.	36	2.0
Linn, Ore.	73	1.8
Shasta, Cal.	35	1.6
Bradley, Ark.	7	1.4
Rapides, La.	23	1.4
Umatilla, Ore.	15	1.4
Lincoln, Ore.	64	1.4
Clarke, Ala.	21	1.3
Grays Harbor, Wash.	23	1.3
Total Above Counties	1,237	52.7
Industry Total	19,778	303.8
% of U. S.	6.3	17.3

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2422—Veneer Mills		
Davidson, N. C.	8	.4
Lane, Ore.	4	.3
Jefferson, Ky.	5	.3
Marion, Ind.	7	.3
Madison, Tenn.	1	.2
Del Norte, Cal.	4	.2
Douglas, Ore.	4	.2
Baldwin, Ala.	2	.2
Forsyth, N. C.	1	.2
Henry, Va.	1	.2
Halifax, N. C.	1	.2
Norfolk, Va.	1	.2
Langlade, Wis.	2	.2
Johnson, Ind.	3	.2
Camden, Ga.	1	.2
Guilford, N. C.	7	.2
Orangeburg, S. C.	4	.2
Coos, N. H.	1	.2
Floyd, Ind.	4	.2
Cook, Ill.	1	.2
Total Above Counties	62	4.5
Industry Total	261	12.4
% of U. S.	23.8	36.3

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2423—Shingle Mills		
Snohomish, Wash.	16	.4
Grays Harbor, Wash.	22	.3
King, Wash.	10	.2
Lewis, Wash.	9	.2
Skagit, Wash.	16	.2
Clallam, Wash.	5	.1
Cowlitz, Wash.	7	.1
Multnomah, Ore.	3	.1
Total Above Counties	88	1.6
Industry Total	175	2.6
% of U. S.	50.3	61.5
2424—Cooperage Stock Mills		
Shannon, Mo.	1	.2
Dallas, Ala.	1	.2
Cullman, Ala.	2	.1
Total Above Counties	4	.5
Industry Total	205	2.8
% of U. S.	2.0	17.9

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2425—Excelsior Mills		
Kent, Mich.	1	.2
Winnebago, Wis.	1	.2
Total Above Counties	2	.4
Industry Total	68	1.3
2431—Millwork Plants		
Los Angeles, Cal.	227	3.3
Cook, Ill.	141	2.3
Winnebago, Wis.	6	1.5
Dubuque, Iowa	5	1.4
Wood, Wis.	3	1.0
Hennepin, Minn.	28	1.0
Washington, Minn.	4	1.0
Queens, N. Y.	34	.9
Pierce, Wash.	18	.9
Marathon, Wis.	5	.9
Jefferson, Ky.	13	.8
Multnomah, Ore.	29	.8
King, Wash.	39	.8
Kings, N. Y.	70	.7
Wayne, Mich.	44	.7
Jones, Miss.	4	.7

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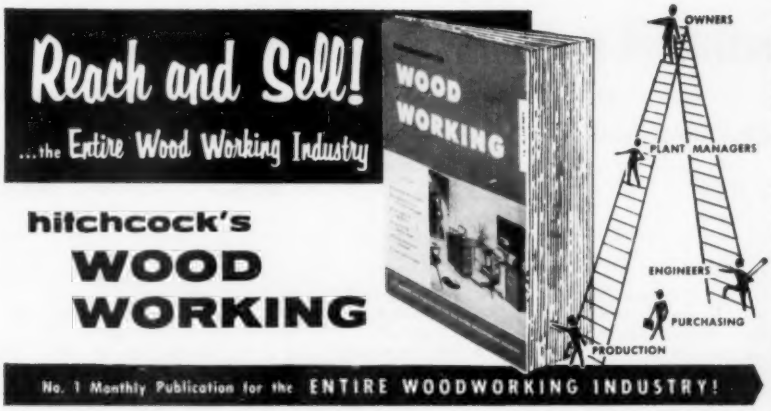
For Special Studies of Specific Industrial Markets, See Page 79



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Manufacture of Lumber & Wood Products—S.I.C. 24 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 24—(Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Spokane, Wash.	16	.7
Milwaukee, Wis.	35	.6
Muscatine, Iowa	4	.6
Marion, Iowa	1	.6
Total Above Counties	670	21.3
Industry Total	3,348	65.9
% of U. S.	20.0	32.3
2432—Plywood Plants		
Linn, Ore.	7	2.0
Pierce, Wash.	7	1.9
Douglas, Ore.	8	1.9
Grays Harbor, Wash.	6	1.8
Lane, Ore.	9	1.7
Coos, Ore.	4	1.7
Thurston, Wash.	5	1.4
Humboldt, Cal.	5	1.3
King, Wash.	5	1.0
Snohomish, Wash.	4	.9
Cowlitz, Wash.	4	.7
Del Norte, Cal.	5	.7
Kewaunee, Wis.	1	.7
Shasta, Cal.	1	.7
Floyd, Ind.	4	.6
Whatcom, Wash.	3	.6
Chautauqua, N. Y.	3	.5
Chatham, Ga.	2	.5
Curry, Ore.	2	.5
Orleans, Vt.	2	.4
Total Above Counties	85	21.5
Industry Total	255	43.8
% of U. S.	33.3	49.1
2433—Prefabricated Wood Products		
Tippecanoe, Ind.	2	1.4
Multnomah, Ore.	8	.7
Floyd, Ind.	1	.6
Chemung, N. Y.	1	.4
Bay, Mich.	3	.4
Henry, Va.	1	.4
De Kalb, Ala.	1	.4
Freeborn, Minn.	4	.3
Covington, Miss.	1	.2
Ozaukee, Wis.	1	.2
Wayne, Mich.	1	.2
Wyandotte, Kan.	1	.2
Effingham, Ill.	1	.2
Miami, Ohio	1	.2
Philadelphia, Pa.	1	.2
Marinette, Wis.	1	.2
Lucas, Ohio	3	.2
Butler, Ohio	1	.1
Lehigh, Pa.	2	.1
Elkhart, Ind.	1	.1
Total Above Counties	36	6.5
Industry Total	231	10.7
% of U. S.	15.6	60.7
2441—Fruit and Vegetable Baskets		
Hertford, N. C.	1	.6
Sumter, Ga.	2	.4
Portsmouth, Va.	1	.4
New Hanover, N. C.	1	.4
Clarke, Va.	1	.4
Hempstead, Ark.	2	.3
Pulaski, Ark.	1	.2
Peach, S. C.	1	.2
Lauderdale, Tenn.	1	.2
Suffolk, Va.	1	.2
Floyd, Ind.	1	.2
Wicomico, Md.	1	.1
Camp, Tex.	1	.1
Trinity, Tex.	1	.1
Gregg, Tex.	1	.1
Gloucester, N. J.	2	.1
Cuyahoga, Ohio	4	.1
Erie, N. Y.	5	.1
Cherokee, Tex.	2	.1
Northampton, N. C.	2	.1
Total Above Counties	32	4.4
Industry Total	134	6.3
% of U. S.	23.9	69.8
2442—Rattan and Willow Ware		
Miami, Ind.	1	.2
Queens, N. Y.	2	.2
New York, N. Y.	11	.1
Total Above Counties	14	.5
Industry Total	75	1.3
% of U. S.	18.7	38.5
2443—Cigar Boxes		
York, Pa.	4	.3
Hillsborough, Fla.	1	.2
Middlesex, N. J.	1	.2
Total Above Counties	6	.7
Industry Total	23	1.0
% of U. S.	26.1	70.0
2444—Wooden Boxes		
Bibb, Ga.	3	1.1
Phillips, Ark.	2	1.0
Cook, Ill.	32	.9
Hamilton, Tenn.	5	.7
Humboldt, Cal.	3	.6
Madison, La.	1	.6
Leon, Fla.	1	.6
Los Angeles, Cal.	38	.6
Tangipahoa, La.	4	.5
Worcester, Mass.	13	.4
Tuscaloosa, Ala.	9	.4
Claiborne, Miss.	1	.4
Pasco, Fla.	1	.4
Thomas, Ga.	1	.4
Jefferson, Tex.	1	.4
Wayne, Mich.	15	.4
Cheshire, N. H.	6	.4
Pike, Miss.	1	.3
Copiah, Miss.	2	.3
Grays Harbor, Wash.	3	.3
Total Above Counties	142	10.7
Industry Total	1,101	35.7
% of U. S.	12.9	30.0
2445—Cooperage		
Jefferson, Ky.	3	.4
Cuyahoga, Ohio	2	.3
Shelby, Tenn.	1	.2
Cook, Ill.	5	.2
Baltimore, City, Md.	4	.2
Venango, Pa.	1	.2
Peoria, Ill.	2	.2
Middlesex, Mass.	4	.2
Vigo, Ind.	1	.1
Pulaski, Ark.	1	.1
Total Above Counties	24	2.1
Industry Total	180	3.4
% of U. S.	13.3	61.8
2491—Wood Preserving		
Escambia, Ala.	1	.8
Spartanburg, S. C.	1	.5
Adams, Col.	3	.4
Bowie, Tex.	2	.4
Ramsey, Minn.	3	.3
Florence, S. C.	1	.3
Portsmouth, Va.	1	.2
Wicomico, Md.	1	.2
Jasper, Mo.	1	.2
Richmond, Ga.	1	.2
New Hanover, N. C.	1	.2
Hennepin, Minn.	4	.2
Cook, Ill.	2	.2
Wayne, Ohio	1	.2
Fulton, Ga.	4	.2
Charleston, S. C.	1	.2
Anoka, Minn.	1	.2
Hillsborough, N. H.	1	.2
Alachua, Fla.	2	.2
Montgomery, Ala.	1	.2
Total Above Counties	33	6.5
Industry Total	288	14.7
% of U. S.	11.5	37.4
2492—Lasts and Related Products		
Plymouth, Mass.	8	.3
Essex, Mass.	7	.2
Norfolk, Mass.	2	.2
St. Louis City, Mo.	9	.2
New York, N. Y.	2	.1
Total Above Counties	28	1.0
Industry Total	51	1.4
% of U. S.	54.9	71.4
2493—Mirror and Picture Frames		
Cook, Ill.	38	1.5
New York, N. Y.	88	.5
Los Angeles, Cal.	33	.2
Kings, N. Y.	24	.2
Fulton, Ga.	8	.2
Montgomery, Miss.	1	.2
La Porte, Ind.	2	.1
Morris, N. J.	2	.1
Middlesex, Mass.	5	.1
St. Louis City, Mo.	6	.1
Total Above Counties	205	3.2
Industry Total	343	4.1
% of U. S.	59.8	78.0

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SM S I C Manufacture of Lumber & Wood Products—(Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 24 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2499—Wood Products, N.E.C.		
Los Angeles, Cal.	117	1.5
Oxford, Me.	25	1.3
Cook, Ill.	73	.8
Franklin, Me.	19	.8
New York, N. Y.	67	.7
Shelby, Tenn.	16	.6
Wayne, Mich.	15	.5
Piscataquis, Me.	5	.5
Hampden, Mass.	6	.5
Penobscot, Me.	10	.5
Cumberland, Me.	11	.5
Somerset, Me.	12	.5
Kent, Mich.	23	.5
San Joaquin, Cal.	5	.5
Kennebec, Me.	3	.4
Kings, N. Y.	44	.4
McKean, Pa.	3	.4
Van Buren, Mich.	3	.4
Seward, Neb.	1	.4
Buncombe, N. C.	2	.4
Total Above Counties	460	12.1
Industry Total	2,103	37.6
% of U. S.	21.9	32.2

Manufacture of Furniture & Fixtures—S.I.C. 25

SM Estimates of 100 Counties with 71.7% of 1957 Employment

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Cook, Ill.	509	20.2
Los Angeles, Cal.	894	20.1
Kings, N. Y.	522	9.5
New York, N. Y.	579	8.5
Kent, Mich.	91	7.8
Philadelphia, Pa.	249	6.1
Worcester, Mass.	98	5.9
Caldwell, N. C.	17	5.6
Henry, Va.	13	5.4
St. Louis, Mo.	25	5.1
Chautauqua, N. Y.	42	4.9
Cuyahoga, Ohio	112	4.9
Davidson, N. C.	28	4.6
Guilford, N. C.	109	4.6
Hamilton, Ohio	63	4.6
Catawba, N. C.	55	4.0
Baltimore, Md.	4	3.8
Mahoning, Ohio	12	3.7
Queens, N. Y.	150	3.6
York, Pa.	43	3.5
Kenosha, Wis.	5	3.4
Dade, Fla.	142	3.4
Fulton, Ga.	42	3.4
Kane, Ill.	23	3.3
Wayne, Mich.	114	3.0
Middlesex, Mass.	92	2.9
Shelby, Tenn.	50	2.8
Jefferson, Ky.	49	2.7
San Francisco, Cal.	95	2.7
Sebastian, Ark.	23	2.5
Dallas, Tex.	76	2.4
Dubois, Ind.	28	2.4
Stark, Ohio	10	2.4
Suffolk, Mass.	128	2.4
Erie, N. Y.	39	2.3
Harris, Tex.	77	2.3
Iredell, N. C.	15	2.2
Union, N. J.	38	2.2
Allegheny, Pa.	63	2.2
Tippecanoe, Ind.	3	2.0
Bronx, N. Y.	140	1.9
Muskegon, Mich.	7	1.9
Alameda, Cal.	93	1.9
Hudson, N. J.	61	1.9
Fayette, Ind.	2	1.8
St. Joseph, Mich.	7	1.8
Multnomah, Ore.	62	1.7
Campbell, Va.	5	1.7
Hinds, Miss.	12	1.6
Nassau, N. Y.	57	1.6
Winnebago, Ill.	22	1.6
Sheboygan, Wis.	21	1.5
Elkhart, Ind.	21	1.5
Manitowoc, Wis.	4	1.5
Lycoming, Pa.	16	1.4
Monroe, N. Y.	31	1.4
Wilkes, N. C.	15	1.4
Ottawa, Mich.	25	1.4
Essex, N. J.	96	1.4
McDowell, N. C.	3	1.4
Perry, Ind.	5	1.4
Erie, Pa.	15	1.4
Pierce, Wash.	30	1.3
Hennepin, Minn.	67	1.3
Vanderburgh, Ind.	19	1.3
Hamilton, Tenn.	24	1.3
St. Joseph, Ind.	8	1.3
Milwaukee, Wis.	44	1.3
Cattaraugus, N. Y.	7	1.2
Du Page, Ill.	10	1.2
Saline, Ark.	3	1.2
Randolph, N. C.	16	1.2
Poinsett, Ark.	1	1.2
Marion, Ind.	41	1.2
Columbiana, Ohio	8	1.1
La Porte, Ind.	10	1.1
Davidson, Tenn.	22	1.1
Forsyth, N. C.	12	1.1
Washington, Va.	4	1.0
Oklahoma, Okla.	39	1.0
Franklin, Ohio	35	1.0
Carroll, Va.	5	1.0
Sumter, S. C.	6	1.0
King, Wash.	74	1.0
Kankakee, Ill.	5	1.0
Shelby, Ind.	6	1.0
New Haven, Conn.	46	1.0
Jackson, Mo.	52	1.0
Tarrant, Tex.	41	.9
Lackawanna, Pa.	14	.9
Hillsborough, N. H.	24	.9
Hamblen, Tenn.	13	.9
Surry, N. C.	6	.9
Luzerne, Pa.	16	.9
Chatham, N. C.	4	.9
Roanoke, Va.	10	.9
Wabash, Ind.	5	.9
Bristol, Mass.	24	.9
Broome, N. Y.	4	.9
Montgomery, Pa.	24	.8
Total Above Counties	6,228	261.7
% of U.S.A. Total	80.6	71.7

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SM Estimates, 1957, for 4-Digit Industries of S.I.C. 25

The 15 four-digit furniture and fixture industries are dominated in percentage gains by public building furniture, the demand for which is powered by the nationwide surge in the building of schools and other structures. The 104% gain in this sub-group topped all others in this classification but the prosperity of the medical, dental, legal and other professions, as well as a higher level of business generally, produced heavy sales gains in office furniture, which peaked to a high of 88% in metal office furniture. This 2-digit group does not include establishments engaged primarily in the production of millwork, which are listed as S.I.C. 2431. Woodworking to individual order or in the nature of reconditioning and repair is carried in non-manufacturing industries. **No significant aggregate figure can be shown, for the 3-digit industries or the 2-digit overall industry.** **See page 83.**

The rankings shown here represent a small part of the available material. Complete county listings may be obtained at a nominal cost from Market Statistics, Inc., 432 Fourth Ave., New York 16, N. Y. MUrray Hill 4-3559

Manufacture of Furniture & Fixtures—S.I.C. 25 (Cont'd)

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 25—(Continued)

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	Gross Sales Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
251	*Household furniture*					
2511	Wood furniture, not upholstered	2,785	1,113	1,269	124.9	126.8
2512	House furniture, upholstered	1,780	633	798	56.0	62.3
2514	Metal house furniture	641	403	484	29.6	34.3
2515	Mattresses and bedsprings	1,195	465	544	32.1	32.1
2519	Household furniture, n. e. c.	69	16	16	1.3	1.2
252	*Office furniture*					
2521	Wood office furniture	112	53	85	5.5	5.7
2522	Metal office furniture	129	203	382	16.1	18.6
253	*Public and professional furniture*					
2531	Public-building furniture	292	160	326	14.0	17.5
2532	Professional furniture	102	65	90	5.5	4.8
2541	Partitions and fixtures	1,626	397	536	33.1	38.8
256	*Screens, shades, and blinds*					
2561	Window and door screens	215	71	97	4.4	4.7
2562	Window shades	196	64	88	4.4	4.7
2563	Venetian blinds	916	114	127	9.4	8.8
259	*Furniture and fixtures, n. e. c.*					
2591	Restaurant furniture	163	27	47	3.4	3.8
2599	Furniture and fixtures, n. e. c.	52	11	13	.8	.7

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 25

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2511—Wood Furniture, Not Upholstered		
Los Angeles, Cal.	297	5.7
Caldwell, N. C.	13	4.7
Cook, Ill.	104	4.7
Davidson, N. C.	19	3.8
Worcester, Mass.	45	2.9
Henry, Va.	6	2.6
Kent, Mich.	30	2.5
Burke, N. C.	6	2.5
Kings, N. Y.	122	2.4
Martinsville, Va.	6	2.3
York, Pa.	26	2.2
Chautauqua, N. Y.	22	2.1
Jefferson, Ky.	14	1.8
Campbell, Va.	1	1.6
New York, N. Y.	127	1.5
Winnebago, Ill.	15	1.4
Hinds, Miss.	2	1.3
Shelby, Tenn.	13	1.3
Catawba, N. C.	10	1.3
Sheboygan, Wis.	7	1.2
Total Above Counties	865	49.8
Industry Total	2,785	126.8
% of U. S.	31.1	39.3
2512—Household Furniture, Upholstered		
Los Angeles, Cal.	200	4.8
Guilford, N. C.	74	3.0
Cook, Ill.	71	2.6
New York, N. Y.	151	2.3
Catawba, N. C.	38	2.0
Worcester, Mass.	26	1.4
Hamblen, Tenn.	3	1.2
Kankakee, Ill.	2	1.2
Kings, N. Y.	80	1.1
Kent, Mich.	34	1.1
Columbia, Ohio	5	.9
Broome, N. Y.	2	.7
Lycoming, Pa.	7	.8
Du Page, Ill.	3	.8
Cuyahoga, Ohio	28	.8
Caldwell, N. C.	4	.8
Adams, Ind.	3	.7
Philadelphia, Pa.	54	.6
Hennepin, Minn.	17	.6
Middlesex, Mass.	21	.5
Total Above Counties	823	26.3
Industry Total	1,780	62.3
% of U. S.	46.2	42.2
2514—Metal House Furniture		
Cook, Ill.	60	3.6
Los Angeles, Cal.	57	2.2
Fayette, Ind.	2	1.8
Kane, Ill.	5	1.8
Philadelphia, Pa.	37	1.8
Kings, N. Y.	78	1.8
St. Louis City, Mo.	6	1.2
Bartholomew, Ind.	3	1.1
Wayne, Mich.	12	1.1
Delaware, Ind.	3	1.0
Columbia, Ohio	1	.8
Coles, Ill.	1	.8
Cattaraugus, N. Y.	1	.8
Allegheny, Pa.	6	.7
Dade, Fla.	13	.7
Shelby, Tenn.	5	.7
Queens, N. Y.	16	.6
Lackawanna, Pa.	2	.6
Fulton, Ga.	3	.6
Miami, Ohio	1	.4
Total Above Counties	312	24.1
Industry Total	641	34.3
% of U. S.	48.7	70.3
2515—Mattresses and Bedsprings		
Cook, Ill.	50	3.2
Kenosha, Wis.	2	3.0
Los Angeles, Cal.	75	1.5
Union, N. J.	3	1.5
Fulton, Ga.	5	1.4
San Francisco, Cal.	15	1.4
Cuyahoga, Ohio	8	1.0
Kings, N. Y.	60	1.0
Middlesex, Mass.	16	.7
New York, N. Y.	36	.7
Suffolk, Mass.	18	.6
Shelby, Tenn.	4	.6
Dallas, Tex.	7	.5
Worcester, Mass.	9	.5
Allegheny, Pa.	9	.5
Wayne, Mich.	15	.4
Ramsey, Minn.	5	.4
Wyandotte, Kan.	2	.4
Essex, N. J.	20	.4
Total Above Counties	367	20.2
Industry Total	1,195	32.1
% of U. S.	30.7	62.9
2519—Household Furniture, N.E.C.		
Cook, Ill.	5	.3
Los Angeles, Cal.	14	.2
Queens, N. Y.	6	.2
Des Moines, Iowa	1	.1
Kings, N. Y.	4	.1
Total Above Counties	30	.9
Industry Total	69	1.2
% of U. S.	43.5	75.0
2521—Wood Office Furniture		
Dubois, Ind.	8	1.1
Guilford, N. C.	4	.6
Kent, Mich.	4	.5
Herkimer, N. Y.	2	.4
Steuben, N. Y.	1	.4
Chatham, N. C.	1	.4
New York, N. Y.	15	.3
Cuyahoga, Ohio	2	.2
Davie, N. C.	1	.2
Lycoming, Pa.	3	.2
Cumberland, Pa.	1	.2
Des Moines, Iowa	1	.2
Milwaukee, Wis.	2	.2
Cook, Ill.	5	.1
Los Angeles, Cal.	9	.1
Erie, N. Y.	1	.1
Vanderburgh, Ind.	1	.1
Tarrant, Tex.	3	.1
Total Above Counties	64	5.4
Industry Total	112	5.7
% of U. S.	57.1	94.7
2522—Metal Office Furniture		
Mahoning, Ohio	2	3.7
Chautauqua, N. Y.	4	1.6
Kane, Ill.	3	1.0
Kent, Mich.	5	.9
Muskegon, Mich.	1	.9
York, Pa.	1	.8
Erie, N. Y.	1	.8
Philadelphia, Pa.	7	.8
Middlesex, N. J.	1	.8
Hamilton, Ohio	1	.7
Bronx, N. Y.	1	.5
Monroe, N. Y.	1	.5
Albemarle, Va.	1	.5
St. Joseph, Mich.	2	.3
Erie, Pa.	2	.3
Essex, N. J.	3	.2
Los Angeles, Cal.	12	.2
Kings, N. Y.	6	.2
Jackson, Md.	1	.2
Linn, Iowa	1	.2
Total Above Counties	56	14.9
Industry Total	129	18.6
% of U. S.	43.4	80.1
2531—Public Building and Related Furniture		
Kent, Mich.	4	2.7
Cook, Ill.	16	1.1
Bell, Tex.	4	.9
Menominee, Mich.	1	.9
Smyth, Va.	1	.9
Los Angeles, Cal.	19	.7
Herkimer, N. Y.	1	.5
Wabash, Ind.	1	.5
Tyrrell, N. C.	1	.5
Catawba, N. C.	3	.5
Randolph, N. C.	3	.4
Brown, Wis.	3	.2
Philadelphia, Pa.	8	.2
Essex, N. J.	3	.2
Allegheny, Pa.	1	.2
Pierce, Wash.	1	.2
Dade, Fla.	2	.1
Worcester, Mass.	3	.1
Alameda, Cal.	4	.1
Chatham, N. C.	1	.1
Total Above Counties	80	11.0
Industry Total	292	17.5
% of U. S.	27.4	62.9

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SM S I C Manufacture of Furniture & Fixtures—(Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 25 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2512—Professional Furniture		
Manitowoc, Wis.	1	1.0
Nassau, N. Y.	2	.6
Muskegon, Mich.	3	.4
Lenawee, Mich.	2	.3
St. Louis, Mo.	2	.3
Marshall, Ind.	2	.2
Cook, Ill.	8	.2
Cambria, Pa.	2	.2
St. Louis City, Mo.	3	.2
Macon, Ga.	1	.2
Chautauqua, N. Y.	1	.2
Kings, N. Y.	7	.1
Marion, Ind.	3	.1
Erie, N. Y.	1	.1
Hamilton, Ohio	2	.1
Total Above Counties	40	4.2
Industry Total	102	4.8
% of U. S.	39.2	87.5
2541—Partitions and Fixtures		
Cuyahoga, Ohio	31	2.7
Cook, Ill.	97	2.4
Stark, Ohio	5	1.9
Kings, N. Y.	95	1.7
New York, N. Y.	137	1.7
Queens, N. Y.	31	1.5
Philadelphia, Pa.	5	1.5
Los Angeles, Cal.	98	1.5
Kane, Ill.	6	.9
Orange, Va.	1	.8
Kent, Mich.	7	.7
Franklin, Ohio	11	.6
San Francisco, Cal.	30	.6
Hillsborough, N. H.	3	.4
Branch, Mich.	1	.4
Suffolk, Mass.	27	.4
Baltimore City, Md.	17	.4
Hamilton, Ohio	18	.3
Chautauqua, N. Y.	4	.3
Essex, Mass.	3	.3
Total Above Counties	625	21.0
Industry Total	1,626	38.8
% of U. S.	38.4	54.1
2561—Window and Door Screens		
Cook, Ill.	18	.4
Oklahoma, Okla.	5	.4
Los Angeles, Cal.	21	.3
Dade, Fla.	8	.3
Philadelphia, Pa.	[1	.2
Stark, Ohio	[1	.2
Shiawassee, Mich.	1	.2
Shelby, Tenn.	4	.2
St. Louis, Mo.	2	.1
Alameda, Cal.	4	.1
Erie, Pa.	1	.1
McKean, Pa.	1	.1
Total Above Counties	67	2.6
Industry Total	215	4.7
% of U. S.	31.2	55.3
2562—Window Screens		
Hamilton, Ohio	1	.6
St. Joseph, Mich.	1	.6
Cook, Ill.	25	.6
New York, N. Y.	15	.5
St. Lawrence, N. Y.	2	.4
Providence, R. I.	2	.2
Oswego, N. Y.	1	.2
Kings, N. Y.	12	.2
Muskegon, Mich.	1	.1
Los Angeles, Cal.	14	.1
Bergen, N. J.	2	.1
Hudson, N. J.	2	.1
Total Above Counties	78	3.7
Industry Total	196	4.7
% of U. S.	39.8	78.7
2563—Venetian Blinds		
Los Angeles, Cal.	66	.5
Lycoming, Pa.	1	.3
Bristol, Mass.	6	.3
Cook, Ill.	40	.3
New York, N. Y.	31	.3
Kings, N. Y.	39	.3
Philadelphia, Pa.	19	.2
Harris, Tex.	13	.2
Allegheny, Pa.	5	.2
St. Louis City, Mo.	6	.2
Bronx, N. Y.	16	.1
Queens, N. Y.	17	.1
Dallas, Tex.	13	.1
Hamilton, Ohio	7	.1
Jefferson, Ala.	6	.1
Fulton, Ga.	5	.1
Westchester, N. Y.	8	.1
Total Above Counties	303	3.5
Industry Total	916	8.8
% of U. S.	33.1	39.8
2591—Restaurant Furniture		
St. Louis City, Mo.	8	.8
York, Pa.	1	.4
Sheboygan, Wis.	1	.4
Los Angeles, Cal.	20	.3
Winnebago, Wis.	1	.2
Worcester, Mass.	1	.2
Total Above Counties	32	2.3
Industry Total	163	3.8
% of U. S.	19.6	60.5
2599—Furniture and Fixtures, N.E.C.		
Cook, Ill.	3	.1
Total Above Counties	3	.1
Industry Total	52	.7
% of U. S.	5.8	14.3

Manufacture of Paper & Allied Products—S.I.C. 26

SM Estimates for 100 Counties with 66.0% of 1957 Employment

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Cook, Ill.	306	23.0
Los Angeles, Cal.	206	13.0
Kings, N. Y.	232	10.5
Philadelphia, Pa.	171	10.0
Kalamazoo, Mich.	28	9.8
New York, N. Y.	315	9.2
Middlesex, Mass.	73	8.5
Ramsey, Minn.	20	8.3
Butler, Ohio	19	7.7
Hampden, Mass.	66	7.7
Baltimore, Md.	7	7.4
Hudson, N. J.	62	6.9
Queens, N. Y.	64	6.8
Mobile, Ala.	16	6.7
St. Louis, Mo.	8	6.6
Chatham, Ga.	10	6.6
Hamilton, Ohio	47	6.0
Winnebago, Wis.	22	5.7
Worcester, Mass.	47	5.2
Outagamie, Wis.	22	5.2
Wayne, Mich.	43	5.0
Wood, Wis.	[9	4.7
Cuyahoga, Ohio	48	4.5
Penobscot, Me.	10	4.4
Brown, Wis.	19	4.4
Niagara, N. Y.	25	4.2
Bergen, N. J.	38	4.2
Essex, N. J.	71	3.8
Oswego, N. Y.	17	3.7
Alameda, Cal.	36	3.6
Shelby, Tenn.	19	3.6
Monroe, Mich.	12	3.6
Cumberland, Me.	9	3.6
Coos, N. H.	11	3.6
Milwaukee, Wis.	40	3.5
Henrico, Va.	27	3.5
Kennebec, Me.	10	3.5
Clark, Wash.	9	3.4
Jefferson, La.	3	3.3
Saratoga, N. Y.	21	3.2
Snohomish, Wash.	7	3.1
Harris, Tex.	16	3.1
Haywood, N. C.	2	3.1
Jones, Miss.	4	3.1
Carlton, Minn.	4	3.0
Washington, La.	5	3.0
Montgomery, Ohio	19	3.0
Marathon, Wis.	8	3.0
Berkshire, Mass.	19	3.0
Fulton, Ga.	23	3.0
Allegheny, Pa.	26	3.0
Escambia, Fla.	7	2.9
Ross, Ohio	4	2.8
Morehouse, La.	6	2.8
Erie, N. Y.	32	2.8
Marion, Ind.	21	2.8
Cowlitz, Wash.	9	2.7
Oxford, Me.	4	2.7
Ouachita, La.	8	2.7
Erie, Pa.	9	2.6
New Haven, Conn.	28	2.6
Dallas, Tex.	29	2.6
Webster, La.	4	2.6
Essex, Mass.	27	2.5
Jefferson, N. Y.	21	2.5
Delaware, Pa.	11	2.4
Georgetown, S. C.	4	2.4
Berrien, Mich.	11	2.4
York, Pa.	21	2.3
Suffolk, Mass.	67	2.3
Montgomery, Pa.	17	2.3
Darlington, S. C.	4	2.3
Clackamas, Ore.	6	2.2
Bucks, Pa.	15	2.2
Middlesex, N. J.	21	2.2
Hartford, Conn.	27	2.2
Adams, Miss.	3	2.1
Chester, Pa.	19	2.1
Ouachita, Ark.	6	2.1
Duval, Fla.	12	2.0
Wayne, Ohio	5	2.0
Blair, Pa.	[8	2.0
Koochiching, Minn.	4	2.0
Alleghany, Va.	3	2.0
Northampton, Pa.	11	2.0
Allegany, Md.	2	1.9
Strafford, N. H.	5	1.9
New London, Conn.	15	1.9
Jackson, Miss.	2	1.9
Rockland, N. Y.	4	1.9
Providence, R. I.	39	1.9
Contra Costa, Cal.	13	1.8
Bronx, N. Y.	45	1.8
Washington, N. Y.	15	1.8
Madison, Ill.	7	1.8
Hamilton, Tenn.	7	1.8
Bay, Fla.	3	1.8
Passaic, N. J.	40	1.8
Union, N. J.	27	1.8
Monroe, N. Y.	35	1.7
Total Above Counties	3,053	380.1
% of U.S.A. Total	61.0	66.0

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Manufacture of Paper & Allied Products—S.I.C. 26 (Cont'd)

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 26

All 12 of the component industries in this group showed substantial gains over 1954, with the exception of wallpaper, which increased only 4%, as decorating trends in the period were more to paint and other types of wall decorations. Most of these 4-digit industries, however, averaged better than a 25% gain for the period, with pulp goods, pressed and molded, recording an outstanding 68% under the stimulus of novelty item development. The major 2-digit group includes the manufacture of pulps from wood and other cellulose fibers and rags, as well as the manufacture of paper and paperboard into converted products. Certain types of converted paper products are classified elsewhere, such as abrasive paper in S.I.C. 3291, carbon paper in 3955, and photo-sensitized and blueprint paper in 3861.

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales: Value Products Shipped ($ million) 1954 Census	Gross Sales: Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
261	*Pulp, paper and board*					
2611	Pulp mills	252	1,577	1,987	57.7	58.4
2612	Paper and paper board mills	589	3,792	4,892	142.2	151.1
2613	Building paper and board mills	91	305	342	16.4	16.0
2641	Paper coating and glazing	277	622	815	27.7	30.6
2651	Envelopes	196	195	267	15.9	19.0
2661	Paper bags	381	623	868	33.3	42.4
267	*Paperboard containers*					
2671	Paperboard boxes	1,704	2,180	2,790	133.0	184.5
2674	Fiber cans, tubes, drums, etc.	184	147	181	12.1	12.4
269	*Pulp, paper & board products, n. e. c.*					
2691	Die-cut paper and board	352	207	261	12.3	12.8
2694	Wall paper	76	40	42	3.6	3.8
2699	Pulp goods, pressed and molded	43	42	71	4.6	4.0
	Paper and board products, n. e. c.	873	1,428	1,814	73.2	76.5

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 26

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2611—Pulp Mills		
Penobscot, Me.	5	2.0
Adams, Miss.	2	1.5
Cowlitz, Wash.	4	1.4
Chatham, Ga.	3	1.4
Wood, Wis.	4	1.4
Georgetown, S. C.	2	1.4
Coos, N. H.	2	1.3
Snohomish, Wash.	3	1.2
Chatham, Wash.	3	1.1
Nassau, Fla.	2	1.1
Mobile, Ala.	4	1.1
Hopewell City, Va.	2	1.1
Haywood, N. C.	1	1.1
Morehouse, La.	2	1.1
Outagamie, Wis.	4	.9
Carlton, Minn.	2	.9
Macon, Wash.	3	.9
Brown, Wis.	4	.8
Bay, Fla.	2	.8
Blair, Pa.	3	.7
Total Above Counties	57	23.2
Industry Total	252	58.4
% of U. S.	22.6	39.7
2612—Paper and Paperboard Mill		
Butler, Ohio	8	4.7
Hampden, Mass.	17	3.8
Wood, Wis.	4	3.1
Kalamazoo, Mich.	10	3.1
Cumberland, Me.	1	2.9
Outagamie, Wis.	5	2.4
Ross, Ohio	2	2.3
Berkshire, Mass.	10	2.2
Niagara, N. Y.	6	2.2
Winnebago, Wis.	8	2.2
Penobscot, Me.	4	2.2
Haywood, N. C.	1	1.9
Chatham, Ga.	2	1.9
Oxford, Me.	1	1.9
Saratoga, N. Y.	7	1.9
Jefferson, N. Y.	9	1.9
Mobile, Ala.	3	1.7
Kennebec, Me.	4	1.7
Clark, Wash.	2	1.6
Webster, La.	1	1.6
Total Above Counties	105	47.2
Industry Total	589	151.1
% of U. S.	17.8	31.2
2613—Building Paper and Board Mills		
Jefferson, La.	1	2.9
Jones, Miss.	1	2.5
Carlton, Minn.	1	.7
Koochiching, Minn.	1	.7
Mercer, N. J.	2	.4
Lauderdale, Miss.	1	.4
Mobile, Ala.	2	.4
Bibb, Ga.	1	.4
Greenville, Va.	1	.4
Adams, Miss.	1	.4
Oswego, N. Y.	2	.4
Columbia, Ore.	1	.4
Washington, Miss.	1	.4
Mendocino, Cal.	1	.4
Montgomery, Pa.	1	.2
Hill, Ill.	2	.2
Erie, Pa.	1	.2
Butler, Ohio	1	.2
Dubuque, Iowa	1	.2
Carroll, Md.	1	.2
Total Above Counties	24	12.0
Industry Total	91	16.0
% of U. S.	26.4	75.0
2641—Paper Coating and Glazing		
Ramsey, Minn.	1	5.7
Kalamazoo, Mich.	7	2.7
Cook, Ill.	20	2.4
Hillsborough, N. H.	1	1.2
Worcester, Mass.	7	.9
Butler, Ohio	3	.9
Winnebago, Wis.	2	.9
Middlesex, N. J.	3	.8
Essex, Mass.	2	.8
Bucks, Pa.	1	.8
Knox, Ohio	1	.8
Alameda, Cal.	5	.6
Hampden, Mass.	7	.5
Los Angeles, Cal.	8	.4
Hennepin, Minn.	1	.4
Bronx, N. Y.	2	.4
Hunterdon, N. J.	1	.4
Ulster, N. Y.	1	.4
Berrien, Mich.	1	.4
Outagamie, Wis.	1	.4
Total Above Counties	75	21.8
Industry Total	277	30.6
% of U. S.	27.1	71.2
2651—Envelopes		
Cook, Ill.	18	1.6
New York, N. Y.	25	1.4
Worcester, Mass.	7	1.3
Montgomery, Ohio	3	1.3
St. Louis City, Mo.	5	1.0
Kings, N. Y.	6	.9
Philadelphia, Pa.	11	.8
Hampden, Mass.	3	.6
Wayne, Mich.	5	.6
Jackson, Mo.	6	.6
Los Angeles, Cal.	11	.6
Hartford, Conn.	2	.5
Marion, Ind.	3	.5
Cuyahoga, Ohio	4	.5
Lake, Ill.	1	.5
San Francisco, Cal.	5	.3
Baltimore City, Md.	4	.3
Ramsey, Minn.	5	.3
Dallas, Tex.	4	.3
Milwaukee, Wis.	2	.2
Total Above Counties	130	14.1
Industry Total	196	19.0
% of U. S.	66.3	74.2
2661—Paper Bags		
Chatham, Ga.	2	3.2
Cook, Ill.	30	1.7
Mobile, Ala.	5	1.7
St. Louis City, Mo.	6	1.4
Escambia, Fla.	1	1.4
Los Angeles, Cal.	24	1.4
Cuyahoga, Ohio	5	1.1
Tuscaloosa, Ala.	1	.9
Hampden, Mass.	2	.9
Richmond City, Va.	4	.9
Putnam, Fla.	1	.9
Ouachita, Ark.	2	.9
Middlesex, Mass.	6	.9
Jackson, La.	1	.9
Ouachita, La.	3	.8
New York, N. Y.	20	.8
Kings, N. Y.	30	.7
Brooke, W. Va.	4	.7
Alameda, Cal.	5	.7
Philadelphia, Pa.	9	.7
Total Above Counties	161	22.6
Industry Total	381	42.4
% of U. S.	42.3	53.3

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SM S I C Manufacture of Paper & Allied Products—(Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 26 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2671—Paperboard Boxes		
Cook, Ill.	176	12.2
Philadelphia, Pa.	78	6.2
Kings, N. Y.	107	5.9
Los Angeles, Cal.	72	5.4
New York, N. Y.	106	4.3
Hudson, N. J.	34	4.2
Baltimore City, Md.	21	4.2
Queens, N. Y.	27	3.5
Middlesex, Mass.	27	3.4
St. Louis City, Mo.	31	3.1
Hamilton, Ohio	17	2.9
Milwaukee, Wis.	15	2.6
Cuyahoga, Ohio	20	2.4
Bergen, N. J.	15	2.1
Erie, N. Y.	19	2.1
New Haven, Conn.	17	2.1
Allegheny, Pa.	12	2.1
Essex, N. J.	27	2.1
Monroe, Mich.	4	2.0
Calhoun, Mich.	4	1.6
Total Above Counties	779	74.4
Industry Total	1,704	164.5
% of U. S.	45.7	45.2
2674—Fiber Cans, Tubes and Drums		
Darlington, S. C.		
St. Louis, Mo.	3	.9
Berks, Pa.	1	.7
Van Wert, Ohio	1	.7
Hudson, N. J.	4	.6
Cook, Ill.	9	.5
Will, Ill.	1	.4
Providence, R. I.	3	.4
Warren, N. J.	2	.4
Cuyahoga, Ohio	4	.4
Philadelphia, Pa.	10	.4
Middlesex, Mass.	6	.3
Shelby, Tenn.	3	.3
Union, N. J.	6	.2
Wayne, Mich.	4	.2
Queens, N. Y.	4	.2
Erie, N. Y.	2	.2
New Castle, Del.	1	.2
Washington, D. C.	1	.1
Ramsey, Minn.	1	.1
Total Above Counties	67	8.5
Industry Total	184	12.4
% of U. S.	36.4	68.5
2691—Die-Cut Paper and Board		
Wayne, Mich.	9	1.8
New York, N. Y.	67	1.1
Kings, N. Y.	23	.7
Broome, N. Y.	2	.7
Cook, Ill.	34	.7
Queens, N. Y.	2	.4
Washington, D. C.	2	.4
Nassau, N. Y.	1	.4
Madison, N. Y.	1	.4
Niagara, N. Y.	1	.4
Hamilton, Ohio	6	.3
Essex, N. J.	9	.3
Los Angeles, Cal.	16	.3
Oakland, Mich.	2	.2
Bergen, N. J.	3	.2
Suffolk, Mass.	11	.2
Milwaukee, Wis.	5	.2
Onondaga, N. Y.	1	.2
Monroe, Mich.	2	.2
Dakota, Minn.	1	.2
Total Above Counties	198	9.3
Industry Total	352	12.8
% of U. S.	56.3	72.7
2693—Wallpaper		
Kendall, Ill.	1	.7
Will, Ill.	7	.4
Warren, N. Y.	1	.4
York, Pa.	4	.4
Erie, N. Y.	2	.2
Worcester, Mass.	1	.2
Bucks, Pa.	3	.2
Cook, Ill.	5	.2
Clinton, N. Y.	1	.2
Grundy, Ill.	1	.1
Cuyahoga, Ohio	3	.1
New York, N. Y.	8	.1
Total Above Counties	37	3.2
Industry Total	76	3.8
% of U. S.	48.7	84.2
2694—Pulp Goods, Pressed and Molded		
Kennebec, Me.	1	.9
Coos, N. H.	1	.5
Hampden, Mass.	1	.5
Rockland, N. Y.	1	.5
Lake, Ind.	2	.3
Kane, Ill.	1	.3
Washington, Wis.	1	.3
St. Lawrence, N. Y.	1	.3
Total Above Counties	9	3.6
Industry Total	29	4.0
% of U. S.	31.0	90.0
2699—Paper and Board Products, N.E.C.		
Cook, Ill.	59	4.6
Middlesex, Mass.	22	3.4
Kalamazoo, Mich.	4	3.0
Los Angeles, Cal.	56	3.0
Kings, N. Y.	40	2.5
Oswego, N. Y.	3	2.3
Winnebago, Wis.	7	2.2
Queens, N. Y.	12	2.1
New York, N. Y.	62	2.0
Brown, Wis.	6	2.0
Northampton, Pa.	1	1.6
Baltimore City, Md.	10	1.4
Hamilton, Ohio	6	1.4
Berrien, Mich.	3	1.3
Philadelphia, Pa.	28	1.3
Delaware, Pa.	3	1.1
Shelby, Tenn.	3	1.0
Hudson, N. J.	4	1.0
Essex, N. J.	16	1.0
Berkshire, Mass.	5	.9
Total Above Counties	350	39.1
Industry Total	873	76.5
% of U. S.	40.1	51.1

Printing and Publishing—S.I.C. 27

SM Estimates for 100 Counties with 78.9% of 1957 Employment

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
New York, N. Y.	3,765	128.9
Cook, Ill.	1,866	81.6
Philadelphia, Pa.	674	32.6
Los Angeles, Cal.	1,316	25.7
Suffolk, Mass.	477	17.3
Wayne, Mich.	506	16.7
Cuyahoga, Ohio	446	14.2
Jackson, Mo.	224	13.2
St. Louis, Mo.	44	12.5
Hamilton, Ohio	277	12.0
District of Columbia	246	12.0
San Francisco, Cal.	395	11.5
Milwaukee, Wisc.	264	10.8
Ramsey, Minn.	110	10.4
Baltimore, Md.	9	9.6
Montgomery, Ohio	86	9.2
Allegheny, Pa.	281	8.5
Kings, N. Y.	354	8.1
Hennepin, Minn.	252	6.7
Nassau, N. Y.	150	6.7
Marion, Ind.	191	6.3
Essex, N. J.	285	6.0
Queens, N. Y.	159	5.9
Westchester, N. Y.	164	5.8
Erie, N. Y.	188	5.5
Middlesex, Mass.	190	5.4
Jefferson, Ky.	109	5.3
Hudson, N. J.	98	5.2
Dallas, Tex.	230	5.0
Fairfield, Conn.	131	5.0
Fulton, Ga.	158	4.9
Harris, Tex.	173	4.7
New Haven, Conn.	136	4.6
Denver, Colo.	163	4.5
Alameda, Cal.	139	4.4
Polk, Iowa	77	4.4
Hampden, Mass.	108	4.4
Franklin, Ohio	118	4.3
Monroe, N. Y.	136	4.0
King, Wash.	190	3.9
Hartford, Conn.	117	3.8
Providence, R. I.	129	3.7
Dade, Fla.	161	3.6
Davidson, Tenn.	86	3.5
Albany, N. Y.	62	3.5
Worcester, Mass.	110	3.3
Bronx, N. Y.	104	3.1
Clark, Ohio	20	3.1
Multnomah, Ore.	152	3.1
Bergen, N. J.	145	3.0
Henrico, Va.	104	2.8
Kent, Mich.	101	2.8
Union, N. J.	78	2.8
Lucas, Ohio	87	2.7
Passaic, N. J.	102	2.6
Middlesex, N. J.	38	2.6
Orleans, La.	126	2.5
Dutchess, N. Y.	25	2.4
Niagara, N. Y.	24	2.3
Bexar, Tex.	83	2.3
Oklahoma, Okla.	80	2.3
Shawnee, Kan.	40	2.2
Sedgwick, Kan.	40	2.2
Onondaga, N. Y.	79	2.2
Lackawanna, Pa.	44	2.1
Jefferson, Ala.	73	2.1
Douglas, Nebr.	94	2.1
York, Pa.	53	2.0
Tarrant, Tex.	101	2.0
Shelby, Tenn.	74	2.0
Racine, Wisc.	21	1.9
San Diego, Cal.	99	1.8
Athens, Ohio	8	1.8
Santa Clara, Cal.	72	1.8
Sedgwick, Kan.	66	1.8
Sullivan, Tenn.	11	1.8
Will, Ill.	24	1.8
Delaware, Pa.	49	1.7
Norfolk, Mass.	61	1.7
Durham, N. C.	21	1.7
Kane, Ill.	40	1.6
Montgomery, Ind.	7	1.6
Salt Lake, Utah	72	1.6
Lancaster, Pa.	47	1.5
Lake, Ind.	39	1.5
Tulsa, Okla.	68	1.5
Dauphin, Pa.	36	1.5
Summit, Ohio	81	1.5
Mecklenberg, N.C.	45	1.5
Ogle, Ill.	13	1.5
Bristol, Mass.	56	1.4
Duval, Fla.	53	1.4
Maricopa, Ariz.	74	1.4
Stark, Ohio	49	1.4
Schenectady, N. Y.	19	1.3
Winnebago, Wisc.	32	1.3
Merrimack, N. H.	17	1.3
Sacramento, Cal.	38	1.2
Essex, Mass.	91	1.2
Northampton, Pa.	36	1.2
Camden, N. J.	55	1.2
New Castle, Del.	34	1.2
Westmoreland, Pa.	37	1.1
Montgomery, Pa.	61	1.1
Hillsborough, N. H.	38	1.1
Chemung, N. Y.	15	1.1
Spokane, Wash.	42	1.1
San Mateo, Cal.	41	1.1
Pulaski, Ark.	34	1.1
Total Above Counties	18,762	684.7
% of U.S.A. Total	57.7	78.9

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Printing and Publishing—S.I.C. 27 (Cont'd)

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 27

Consistent sales gains appear throughout this major group, with bookbinding and commercial printing making the greatest advances. Since Census figures for 1954 were not complete for each segment of the overall group, estimates were made for 1954 value of products shipped in miscellaneous publishing and miscellaneous bookbinding. As explained in the introductory article, these figures represent an average of estimates by a group of authorities in this field, and while they are not official figures, we believe them to be as sound as obtainable. We publish them in the interest of making as comprehensive a grouping of industries as possible in this *Survey of Industrial Buying Power.*

The general group includes establishments engaged in printing by one or more of the common processes, letterpress, lithography, gravure or screen. Establishments publishing newspapers, books and periodicals also are included regardless of whether or not they do their own printing. News syndicates are classified in Service Industries, and textile printing and finishing industries in S.I.C. 22.

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	Gross Sales Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
2711	Newspapers	8,548	3,091	3,647	281.8	310.2
2721	Periodicals	2,045	1,441	1,686	62.4	61.4
273	*Books*					
2731	Books: publishing & printing	814	665	838	34.7	37.3
2732	Book printing	598	221	262	22.7	25.4
2741	Miscellaneous publishing	946	231	280	18.4	18.9
2751	Commercial printing	12,073	2,202	2,819	200.2	220.9
2761	Lithographing	2,924	963	1,271	77.7	79.5
2771	Greeting cards	294	209	278	21.3	19.6
278	*Bookbinding and related industries*					
2781	Bookbinding	730	112	152	17.2	19.7
2782	Blankbooks and paper ruling	334	79	102	8.6	8.9
2783	Loose-leaf binders and devices	154	79	109	8.2	9.0
2789	Miscellaneous bookbinding work	201	22	30	3.3	3.6
279	*Printing trades services*					
2791	Typesetting	1,081	121	156	14.6	16.8
2792	Engraving and plate printing	567	60	73	7.5	7.8
2793	Photoengraving	891	173	232	17.7	21.5
2794	Electrotyping and stereotyping	233	86	96	8.0	7.8

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 27

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2711—Newspapers		
New York, N. Y.	101	19.0
Cook, Ill.	114	11.7
Los Angeles, Cal.	156	11.1
Suffolk, Mass.	38	7.4
Philadelphia, Pa.	33	5.4
Washington, D. C.	20	4.7
Allegheny, Pa.	44	4.5
San Francisco, Cal.	38	4.1
Baltimore City, Md.	13	3.1
Cuyahoga, Ohio	43	3.0
Hamilton, Ohio	22	2.6
Dade, Fla.	23	2.3
Essex, N. J.	22	2.3
Milwaukee, Wis.	23	2.3
Denver, Col.	19	2.2
St. Louis City, Mo.	17	2.2
Harris, Tex.	21	2.2
King, Wash.	41	2.0
Erie, N. Y.	29	2.0
Marion, Ind.	21	1.8
Total Above Counties	838	95.9
Industry Total	8,548	310.2
% of U. S.	9.7	30.9
2721—Periodicals		
New York, N. Y.	494	22.1
Philadelphia, Pa.	40	6.1
Cook, Ill.	217	5.4
Clark, Ohio	1	2.2
Washington, D. C.	50	2.2
Polk, Iowa	11	2.0
Westchester, N. Y.	20	1.6
Los Angeles, Cal.	104	1.2
Cuyahoga, Ohio	32	1.1
Fairfield, Conn.	17	.9
Hamilton, Ohio	12	.8
St. Louis City, Mo.	22	.7
Milwaukee, Wis.	16	.6
Jackson, Mo.	20	.6
Davidson, Tenn.	9	.6
Franklin, Ohio	17	.5
Kane, Ill.	2	.4
Bronx, N. Y.	4	.4
Suffolk, Mass.	35	.4
Wayne, Mich.	32	.4
Total Above Counties	1,155	50.2
Industry Total	2,045	61.4
% of U. S.	56.5	81.8
2731—Books, Publishing and Printing		
New York, N. Y.	277	12.2
Cook, Ill.	71	5.6
Nassau, N. Y.	5	2.0
Philadelphia, Pa.	24	1.6
Racine, Wis.	1	1.4
Suffolk, Mass.	24	1.5
Ramsey, Minn.	8	1.0
Cuyahoga, Ohio	8	1.4
Monroe, N. Y.	2	.7
St. Louis City, Mo.	6	.6
Dallas, Tex.	7	.6
Milwaukee, Wis.	6	.5
Hamilton, Ohio	6	.4
Madison, Ind.	1	.4
Des Moines, Iowa	1	.4
Kings, N. Y.	8	.3
Westchester, N. Y.	15	.3
Lake, Ill.	7	.3
Los Angeles, Cal.	24	.3
Jackson, Mo.	10	.2
Total Above Counties	511	31.7
Industry Total	814	37.3
% of U. S.	62.8	85.0
2732—Book Printing		
New York, N. Y.	123	3.9
Cook, Ill.	33	1.5
Montgomery, Ind.	2	1.5
Sullivan, Tenn.	1	1.5
Middlesex, Mass.	4	1.0
Nassau, N. Y.	5	.9
Norfolk, Mass.	2	.8
York, Pa.	3	.8
Lake, Ind.	2	.8
Union, N. J.	1	.8
Lackawanna, Pa.	1	.8
Worcester, Mass.	2	.8
Winnebago, Wis.	1	.8
Hamilton, Ohio	10	.7
Kings, N. Y.	13	.4
Suffolk, Mass.	17	.4
Philadelphia, Pa.	20	.3
Marion, Ind.	5	.3
Wayne, Mich.	13	.3
Fulton, Ga.	5	.3
Total Above Counties	263	18.6
Industry Total	598	25.4
% of U. S.	44.0	73.2
2741—Miscellaneous Publishing		
New York, N. Y.	246	5.0
Cook, Ill.	58	2.8
Wayne, Mich.	17	.9
Middlesex, Mass.	5	.7
Los Angeles, Cal.	62	.6
Washington, D. C.	9	.4
Marion, Ind.	9	.4
Suffolk, Mass.	15	.4
Westchester, N. Y.	10	.4
Franklin, Ohio	2	.4
Des Moines, Iowa	1	.4
Richmond City, Va.	2	.4
Cuyahoga, Ohio	12	.3
Hennepin, Minn.	7	.2
Allegheny, Pa.	5	.2
Hampden, Mass.	4	.2
Queens, N. Y.	5	.2
Hamilton, Ohio	6	.2
Westmoreland, Pa.	1	.2
New Haven, Conn.	2	.2
Total Above Counties	478	14.5
Industry Total	946	18.9
% of U. S.	50.5	76.7
2751—Commercial Printing		
Cook, Ill.	718	26.6
New York, N. Y.	1,292	19.9
Philadelphia, Pa.	305	8.1
Los Angeles, Cal.	540	7.5
Ramsey, Minn.	47	6.2
Montgomery, Ohio	35	5.5
Hudson, N. J.	52	3.7
Cuyahoga, Ohio	181	3.5
Milwaukee, Wis.	109	3.4
Wayne, Mich.	235	3.3
Hamilton, Ohio	121	3.2
St. Louis City, Mo.	157	3.2
Baltimore City, Md.	120	3.1

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SM S I C Printing and Publishing—S.I.C. 27 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 27 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
San Francisco, Cal.	164	2.9
Suffolk, Mass.	207	2.9
Jefferson, Ky.	48	2.6
Kings, N. Y.	196	2.5
Erie, N. Y.	76	2.2
New Haven, Conn.	67	1.8
Fulton, Ga.	73	1.8
Total Above Counties	4,741	113.9
Industry Total	12,073	220.9
% of U. S.	39.3	51.6

2761—Lithographing

Cook, Ill.	281	9.8
New York, N. Y.	346	7.5
St. Louis City, Mo.	61	2.6
Philadelphia, Pa.	88	2.6
Los Angeles, Cal.	187	2.5
San Francisco, Cal.	54	2.3
Suffolk, Mass.	44	2.1
Hamilton, Ohio	40	1.9
Niagara, N. Y.	2	1.8
Milwaukee, Wis.	48	1.8
Cuyahoga, Ohio	72	1.7
Queens, N. Y.	16	1.6
Wayne, Mich.	56	1.5
Washington, D. C.	30	1.5
Alameda, Cal.	18	1.3
Allegheny, Pa.	31	1.2
Nassau, N. Y.	16	1.2
Monroe, N. Y.	18	1.2
Hennepin, Minn.	36	1.1
Baltimore City, Md.	36	1.0
Total Above Counties	1,460	48.2
Industry Total	2,924	79.5
% of U. S.	49.9	60.6

2771—Greeting Cards

New York, N. Y.	68	3.0
Jackson, Mo.	4	2.1
Cuyahoga, Ohio	5	1.8
Hamilton, Ohio	5	1.8
Cook, Ill.	26	1.5
Suffolk, Mass.	9	1.5
Will, Ill.	3	1.0
Kings, N. Y.	16	.7
Los Angeles, Cal.	14	.7
Westchester, N. Y.	2	.4
Middlesex, Mass.	5	.4
Hillsborough, N. H.	1	.4
Shawnee, Kan.	1	.4
Worcester, Mass.	1	.4
Chemung, N. Y.	1	.4
Philadelphia, Pa.	8	.3
Bronx, N. Y.	5	.3
Queens, N. Y.	9	.3
Hampden, Mass.	3	.2
Providence, R. I.	3	.2
Total Above Counties	189	17.6
Industry Total	294	19.6
% of U. S.	64.3	89.8

2781—Bookbinding

New York, N. Y.	205	7.2
Cook, Ill.	54	2.3
Middlesex, Mass.	10	1.0
Philadelphia, Pa.	35	.9
Wayne, Mich.	14	.8
Los Angeles, Cal.	30	.4
Broome, N. Y.	1	.4
Queens, N. Y.	4	.4
St. Louis City, Mo.	15	.4
Baltimore City, Md.	8	.4
Morgan, Ill.	2	.3
Suffolk, Mass.	18	.3
Cuyahoga, Ohio	17	.2
Monroe, N. Y.	5	.2
Fairfield, Conn.	1	.2
Milwaukee, Wis.	6	.2
Camden, N. J.	2	.2
Hamilton, Ohio	11	.2
Wabash, Ind.	1	.2
Bexar, Tex.	2	.2
Total Above Counties	441	16.4
Industry Total	730	19.7
% of U. S.	60.4	83.2

2782—Blankbooks and Paper Ruling

New York, N. Y.	55	.9
Los Angeles, Cal.	13	.7
Richland, Ohio	1	.7
Cook, Ill.	25	.6
Milwaukee, Wis.	2	.5
Ellis, Tex.	1	.4
Baltimore City, Md.	5	.4
Union, N. J.	5	.4
Chemung, N. Y.	1	.4
St. Joseph, Mich.	1	.4
Philadelphia, Pa.	13	.2
Hampshire, Mass.	1	.2
Shawnee, Kan.	2	.2
Kings, N. Y.	11	.2
Middlesex, Mass.	2	.2
Fairfield, Conn.	1	.2
Hampden, Mass.	2	.2
Cuyahoga, Ohio	3	.2
Jefferson, Ky.	4	.1
Suffolk, Mass.	17	.1
Total Above Counties	175	7.2
Industry Total	334	8.9
% of U. S.	52.4	80.9

2783—Loose-Leaf Binders and Devices

Cook, Ill.	19	1.2
Los Angeles, Cal.	8	.9
New York, N. Y.	30	.9
Hampden, Mass.	2	.8
Kings, N. Y.	3	.8
Onondaga, N. Y.	4	.5
Bristol, Mass.	2	.5
Union, N. J.	1	.5
Milwaukee, Wis.	3	.3
Dutchess, N. Y.	2	.2
St. Louis City, Mo.	8	.2
Marion, Ind.	3	.2
St. Lawrence, N. Y.	1	.2
Delaware, Pa.	2	.2
Queens, N. Y.	1	.2
Cheshire, N. H.	1	.2
Kalamazoo, Mich.	1	.2
Wayne, Mich.	2	.2
Total Above Counties	93	8.2
Industry Total	154	9.0
% of U. S.	60.4	91.1

2789—Miscellaneous Bookbinding Work

New York, N. Y.	69	1.4
Cook, Ill.	27	.7
Los Angeles, Cal.	14	.3
Suffolk, Mass.	9	.1
Total Above Counties	119	2.5
Industry Total	201	3.6
% of U. S.	59.2	69.4

2791—Typesetting

New York, N. Y.	225	4.3
Cook, Ill.	111	2.2
Philadelphia, Pa.	33	1.0
Wayne, Mich.	22	.8
Los Angeles, Cal.	72	.7
St. Louis City, Mo.	26	.4
Suffolk, Mass.	20	.3
Cuyahoga, Ohio	26	.3
Washington, D. C.	10	.3
San Francisco, Cal.	21	.2
Lancaster, Pa.	2	.2
Hennepin, Minn.	10	.2
Hamilton, Ohio	11	.2
Montgomery, Ohio	6	.2
Milwaukee, Wis.	15	.2
Jackson, Mo.	16	.2
Baltimore City, Md.	14	.2
Dallas, Tex.	10	.2
Allegheny, Pa.	15	.1
Monroe, N. Y.	10	.1
Total Above Counties	675	12.3
Industry Total	1,081	16.6
% of U. S.	62.4	74.1

2792—Engraving and Plate Printing

Bronx, N. Y.	1	1.0
New York, N. Y.	97	.8
Philadelphia, Pa.	22	.8
Cook, Ill.	55	.7
Passaic, N. J.	15	.3
Mecklenberg, N. C.	7	.2
New Haven, Conn.	4	.2
Cuyahoga, Ohio	9	.2
Providence, R. I.	10	.2
Worcester, Mass.	1	.1
Jefferson, Ala.	3	.1
Los Angeles, Cal.	18	.1
Jefferson, Ky.	10	.1
Wayne, Mich.	12	.1
Jackson, Mo.	6	.1
Washington, D. C.	8	.1
Bergen, N. J.	5	.1
Total Above Counties	283	5.2
Industry Total	567	7.8
% of U. S.	49.9	66.7

2793—Photoengraving

New York, N. Y.	94	5.0
Cook, Ill.	54	3.4
Philadelphia, Pa.	22	1.3
Wayne, Mich.	21	.8
Los Angeles, Cal.	47	.7
Cuyahoga, Ohio	18	.5
Suffolk, Mass.	13	.4
Marion, Ind.	8	.4
St. Louis City, Mo.	14	.4
San Francisco, Cal.	16	.4
Dallas, Tex.	9	.2
Hamilton, Ohio	13	.2
Milwaukee, Wis.	12	.2
Fairfield, Conn.	10	.2
Queens, N. Y.	3	.2
Washington, D. C.	5	.1
Allegheny, Pa.	11	.1
Providence, R. I.	9	.1
Kings, N. Y.	4	.1
New Haven, Conn.	6	.1
Total Above Counties	389	14.8
Industry Total	891	21.5
% of U. S.	43.7	68.8

2794—Electrotyping and Stereotyping

New York, N. Y.	32	2.0
Cook, Ill.	22	1.2
Philadelphia, Pa.	7	.6
Wayne, Mich.	7	.3
Cuyahoga, Ohio	10	.3
Suffolk, Mass.	5	.3
San Francisco, Cal.	7	.2
Marion, Ind.	3	.2
Davidson, Tenn.	2	.2
Los Angeles, Cal.	8	.2
St. Louis City, Mo.	7	.1
Erie, N. Y.	5	.1
Winnebago, Wis.	2	.1
Total Above Counties	117	5.8
Industry Total	233	7.8
% of U. S.	50.2	74.4

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The rankings shown here represent a small part of the available material. Complete county listings may be obtained at a nominal cost from Market Statistics, Inc., 432 Fourth Ave., New York 16, N. Y. Murray Hill 4-3559

Manufacture of Chemicals & Allied Products—S.I.C. 28

SM Estimates for 100 Counties with 71.7% of 1957 Employment

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Cook, Ill.	615	28.3	Erie, N. Y.	95	8.1	Anderson, Tenn.	1	4.1	New Haven, Conn.	38	3.1	Prince George, Va.	3	2.1
Los Angeles, Cal.	651	19.3	East Baton Rouge, La.	14	7.7	Chesterfield, Va.	5	4.1	Augusta, Va.	4	3.0	Lenoir, N. C.	4	2.1
Wayne, Mich.	189	16.1	Roane, Tenn.	1	7.3	Johnson, Kan.	4	4.0	Bucks, Pa.	17	3.0	Nueces, Tex.	9	2.1
Philadelphia, Pa.	276	16.6	Salem, N. J.	4	7.0	New Castle, Del.	21	4.0	Hennepin, Minn.	72	3.0	Jefferson, La.	11	2.0
Middlesex, N. J.	68	14.9	Lake, Ohio	17	6.9	Brazoria, Tex.	5	3.9	Westchester, N. Y.	71	2.8	Mobile, Ala.	15	2.0
Aiken, S. C.	4	14.3	Davidson, Tenn.	29	6.5	Lake, Ill.	19	3.8	Sauk, Wisc.	2	2.7	Talladega, Ala.	5	2.0
Kanawha, W. Va.	17	13.9	Jefferson, Ky.	55	5.7	Will, Ill.	9	3.7	Delaware, Pa.	23	2.7	Giles, Va.	1	2.0
Hudson, N. J.	156	13.3	Bernalillo, N. M.	3	5.7	Onondaga, N. Y.	26	3.7	Gloucester, N. J.	8	2.6	Saline, Ark.	2	1.9
Union, N. J.	84	12.3	Galveston, Tex.	8	5.6	Roanoke, Va.	11	3.7	Norfolk, Va.	28	2.6	Rensselaer, N. Y.	11	1.9
St. Louis, Mo.	27	12.2	Middlesex, Mass.	135	5.5	Shelby, Tenn.	63	3.6	Fulton, Ga.	80	2.6	Eddy, N. M.	2	1.9
Kings, N. Y.	311	12.2	Rockland, N. Y.	9	5.2	Lake, Ind.	23	3.6	Schuylkill, Pa.	2	2.5	Vigo, Ind.	10	1.9
Essex, N. J.	207	11.7	Hamilton, Tenn.	21	5.2	Hampden, Mass.	28	3.5	Spotsylvania, Va.	1	2.5	Elkhart, Ind.	5	1.9
Hamilton, Ohio	99	11.5	St. Clair, Ill.	18	5.0	Milwaukee, Wisc.	106	3.4	Calcasieu, La.	10	2.4	Pike, Ohio	1	1.8
Sullivan, Tenn.	6	10.7	Clark, Ind.	8	4.9	Summit, Ohio	22	3.4	Putnam, W. Va.	7	2.4			
Cuyahoga, Ohio	221	10.6	Allegheny, Pa.	88	4.9	Fairfield, Conn.	54	3.3	Allegany, Md.	2	2.3	Total Above Counties	5,627	562.4
Midland, Mich.	4	10.3	Montgomery, Va.	1	4.9	Buncombe, N. C.	7	3.3	Mifflin, Pa.	2	2.3			
Harris, Tex.	105	9.9	Somerset, N. J.	10	4.8	Contra Costa, Cal.	27	3.2	San Francisco, Cal.	95	2.3	% of U.S.A. Total	50.8	71.7
Marion, Ind.	63	9.6	Passaic, N. J.	78	4.7	Carter, Tenn.	2	3.2	Morris, N. J.	21	2.3			
Niagara, N. Y.	31	9.3	Bergen, N. J.	101	4.4	Kalamazoo, Mich.	18	3.2	Orange, Tex.	4	2.3			
Baltimore, Md.	8	9.1	Queens, N. Y.	134	4.4	Escambia, Fla.	8	3.1	Dallas, Tex.	86	2.2			
Benton, Wash.	2	8.8	Alameda, Cal.	107	4.2	Henry, Va.	3	3.1	Wyandotte, Kan.	24	2.2			
New York, N. Y.	393	8.7				Sussex, Del.	13	3.1	Warren, Va.	3	2.2			

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 28

This is one of the largest major groups in American industry, with 42 four-digit industries. Synthetic rubber (code number 2824) tops the field with an 80% gain over 1954. An outstanding 53% rise for pharmaceutical preparations (2834) reflects the continued advance of antibiotics and vaccines. Plastics materials (2823) showed a healthy gain of 48% as uses for this adaptable material multiplied. For a more complete picture of the plastics industry, however, the miscellaneous manufactures group (S.I.C. 39) must also be studied, since plastics products not elsewhere classified are listed under code number 3971. Companies primarily engaged in manufacturing silicon carbide are classified in S.I.C. 32, embalming fluids and artists' colors in S.I.C. 39. Establishments primarily engaged in packaging, repackaging and bottling of purchased chemical products, but not in manufacturing chemicals and allied products, are classified in trade industries. The production of natural rock salt is classified in mining industries. **No significant aggregate figures can be shown for the 3-digit industries or the 2-digit overall industries.** **See page 83.**

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	Gross Sales Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
281	*Inorganic chemicals*					
2811	Sulfuric acid	47	139	161	3.8	3.5
2812	Alkalies and chlorine	29	400	508	20.4	20.6
2819	Inorganic chemicals, n. e. c.	442	1,859	2,510	97.0	104.3
282	*Organic chemicals*					
2821	Cyclic (coal-tar) crudes	43	77	111	1.9	2.3
2822	Intermediate coal-tar products	107	716	931	32.7	32.7
2823	Plastic materials	208	1,231	1,822	41.1	46.8
2824	Synthetic rubber	21	361	650	8.5	12.3
2825	Synthetic fibers	46	1,241	1,278	61.1	48.4
2826	Explosives	74	390	573	32.5	42.2
2829	Organic chemicals, n. e. c.	275	2,199	3,277	67.5	77.4
283	*Drugs and medicines*					
2831	Biological products	93	61	75	4.0	3.6
2833	Medicinal chemicals including botanicals	115	252	292	11.5	10.2
2834	Pharmaceutical preparations	1,163	1,643	2,514	76.6	82.3
284	*Soap and related products*					
2841	Soap and glycerin	289	900	1,027	25.8	24.8
2842	Cleaning and polishing products	1,151	560	750	18.0	19.1
2843	Sulfonated oils and assistants	103	63	69	2.4	2.4
285	*Paints and allied products*					
2851	Paints and varnishes	1,469	1,494	1,673	56.6	60.7
2852	Inorganic color pigments	104	371	453	12.2	13.0
2853	Whiting and fillers	98	24	28	1.2	1.4
286	*Gum and wood chemicals*					
2861	Hardwood distillation	34	16	19	1.6	1.6
2862	Softwood distillation	27	89	122	4.4	5.2
2863	Gum naval stores	26	25	30	.5	.5
2865	Tanning and dyeing materials	30	14	15	.7	.6
287	*Fertilizers*					
2871	Fertilizers	260	533	549	19.7	19.2
2872	Fertilizers, mixing only	560	329	339	12.0	12.2
288	*Vegetable and animal oils*					
2881	Cottonseed oil mills	288	546	464	13.7	10.9
2882	Linseed oil mills	12	140	137	1.3	1.2
2883	Soybean oil mills	88	826	942	6.9	7.5
2884	Vegetable oil mills, n. e. c.	51	166	183	2.5	2.6

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SM S I C Chemicals & Allied Products—(Cont'd)

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 28—(Continued)

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	Gross Sales Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
2836	Grease and tallow	500	223	272	11.5	13.2
2887	Fatty acids	15	56	73	1.9	2.4
2889	Animal oils, n. e. c.	61	65	75	2.3	2.3
289	*Chemical products, n. e. c.*					
2891	Printing ink	271	181	230	7.8	8.7
2892	Essential oils	37	21	24	.5	.6
2893	Toilet preparations	710	629	786	24.8	25.9
2894	Glue and gelatin	230	136	158	6.8	7.6
2895	Carbon black	47	102	125	3.4	3.9
2896	Compressed and liquefied gases	428	188	244	10.4	13.0
2897	Insecticide and fungicides	265	175	193	6.5	6.0
2898	Salt	38	72	87	4.0	4.1
2899	Chemical products, n. e. c.	1,204	531	738	21.4	26.7

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 28

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2811—Sulphuric Acid		
Baltimore City, Md.	1	.6
Los Angeles, Cal.	3	.3
Polk, Tenn.	1	.3
Contra Costa, Cal.	2	.3
Cook, Ill.	2	.2
Cuyahoga, Ohio	1	.2
Bergen, N. J.	1	.2
Erie, N. Y.	1	.2
Harris, Tex.	1	.2
Deer Lodge, Mont.	1	.1
East Baton Rouge, La.	1	.1
Fayette, Pa.	1	.1
Pulaski, Va.	1	.1
Bucks, Pa.	1	.1
Vermilion, Ill.	2	.1
Salt Lake, Utah	1	.1
Total Above Counties	21	3.2
Industry Total	47	3.5
% of U. S.	44.7	91.4
2812—Alkalies and Chlorine		
Wayne, Mich.	2	4.1
Lake, Ohio	1	2.7
Onondaga, N. Y.	1	2.3
Summit, Ohio	1	1.7
Smyth, Va.	1	1.6
Kanawha, W. Va.	1	1.4
Marshall, W. Va.	2	.9
Contra Costa, Cal.	1	.7
Harris, Tex.	1	.7
East Baton Rouge, La.	1	.7
Nueces, Tex.	1	.6
Pierce, Wash.	2	.5
Niagara, N. Y.	2	.5
Calcasieu, La.	1	.4
Clark, Nev.	1	.3
Coos, N. H.	1	.2
Muskegon, Mich.	1	.2
Sedgwick, Kan.	1	.2
Washington, Ala.	1	.1
Multnomah, Ore.	1	.1
Total Above Counties	24	19.9
Industry Total	29	20.6
% of U. S.	82.8	96.6
2819—Inorganic Chemicals, N.E.C.		
Aiken, S. C.	1	14.9
Benton, Wash.	2	9.2
Roane, Tenn.	1	7.5
Bernalillo, N. M.	1	5.9
Anderson, Tenn.	1	4.2
Niagara, N. Y.	8	2.6
Hamilton, Ohio	5	2.6
St. Clair, Ill.	2	2.2
Jefferson, La.	1	2.2
Saline, Ark.	2	2.0
Pike, Ohio	1	1.9
Baltimore City, Md.	9	1.7
McCracken, Ky.	1	1.7
Hopewell, Va.	1	1.6
Los Angeles, Cal.	19	1.5
Wayne, Mich.	6	1.5
Union, Ark.	1	1.3
Maury, Tenn.	3	1.3
Lawrence, Ohio	2	1.2
Jefferson, Col.	1	1.2
Total Above Counties	68	68.2
Industry Total	442	104.3
% of U. S.	15.4	65.4
2821—Cyclic Crudes		
Brooke, W. Va.	1	.5
Cook, Ill.	3	.4
Bergen, N. J.	1	.3
Essex, N. J.	1	.2
Cuyahoga, Ohio	2	.1
Mahoning, Ohio	2	.1
Total Above Counties	10	1.6
Industry Total	43	2.3
% of U. S.	23.3	69.6
2822—Intermediates and Organic Colors		
Midland, Mich.	1	6.9
Somerset, N. J.	1	3.7
Gloucester, N. J.	1	2.3
St. Clair, Ill.	1	2.1
Erie, N. Y.	1	1.9
Hamilton, Ohio	4	1.5
Beaver, Pa.	1	1.2
Galveston, Tex.	1	1.2
Union, N. J.	2	1.1
Cook, Ill.	2	.8
Middlesex, Mass.	3	.8
Cabell, W. Va.	2	.7
Rensselaer, N. Y.	1	.7
Essex, N. J.	10	.7
Philadelphia, Pa.	1	.7
Pleasants, W. Va.	1	.7
Passaic, N. J.	8	.5
Los Angeles, Cal.	3	.4
Calhoun, Ala.	1	.4
Bristol, Mass.	1	.4
Total Above Counties	46	28.7
Industry Total	107	32.7
% of U. S.	43.0	87.8
2823—Plastics Materials and Elastomers		
Middlesex, N. J.	5	4.1
Hampden, Mass.	3	3.0
Spotsylvania, Va.	1	2.9
Erie, N. Y.	4	2.7
Philadelphia, Pa.	2	2.6
Bucks, Pa.	1	2.5
Chesterfield, Va.	1	2.4
Midland, Mich.	1	2.2
Clinton, Iowa	1	1.6
Davidson, Tenn.	1	1.6
Niagara, N. Y.	5	1.6
Galveston, Tex.	1	1.4
Allegheny, Pa.	4	1.3
Essex, N. J.	4	.9
Union, N. J.	8	.8
Knox, Tenn.	1	.8
Jefferson, Ky.	2	.8
Transylvania, N. C.	1	.8
Hudson, N. J.	3	.8
New Castle, Del.	7	.7
Total Above Counties	56	35.5
Industry Total	206	46.8
% of U. S.	27.2	75.9
2824—Synthetic Rubber		
Jefferson, Ky.	2	3.7
Harris, Tex.	3	1.9
East Baton Rouge, La.	3	1.7
Jefferson, Tex.	2	1.0
Summit, Ohio	2	.7
New Haven, Conn.	1	.6
Calcasieu, La.	1	.6
Galveston, Tex.	1	.6
Los Angeles, Cal.	1	.6
Hutchinson, Tex.	1	.5
Mercer, N. J.	1	.2
Portage, Ohio	1	.2
Total Above Counties	19	12.3
Industry Total	21	12.3
% of U. S.	90.5	100.0
2825—Synthetic Fibers		
Sullivan, Tenn.	1	4.5
Roanoke City, Va.	1	2.7
Davidson, Tenn.	1	2.6
Buncombe, N. C.	1	2.5
Carter, Tenn.	2	2.4
Henry, Va.	1	2.3
Waynesboro City, Va.	2	2.3
Hamilton, Tenn.	1	2.0
Escambia, Fla.	1	2.0
Sussex, Del.	1	2.0
Mifflin, Pa.	1	1.8
Allegany, Md.	1	1.7
Warren, Va.	1	1.6
Lenoir, N. C.	1	1.6
Giles, Va.	1	1.5
Chesterfield, Va.	1	1.4
York, S. C.	1	1.3
Crawford, Pa.	1	1.2
Lake, Ohio	1	1.2
Wood, W. Va.	2	1.1
Total Above Counties	23	39.7
Industry Total	46	48.4
% of U. S.	50.0	82.0
2826—Explosives		
Radford City, Va.	1	6.0
Johnson, Kan.	1	5.4

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New U. S. Manufacturing Employment Map

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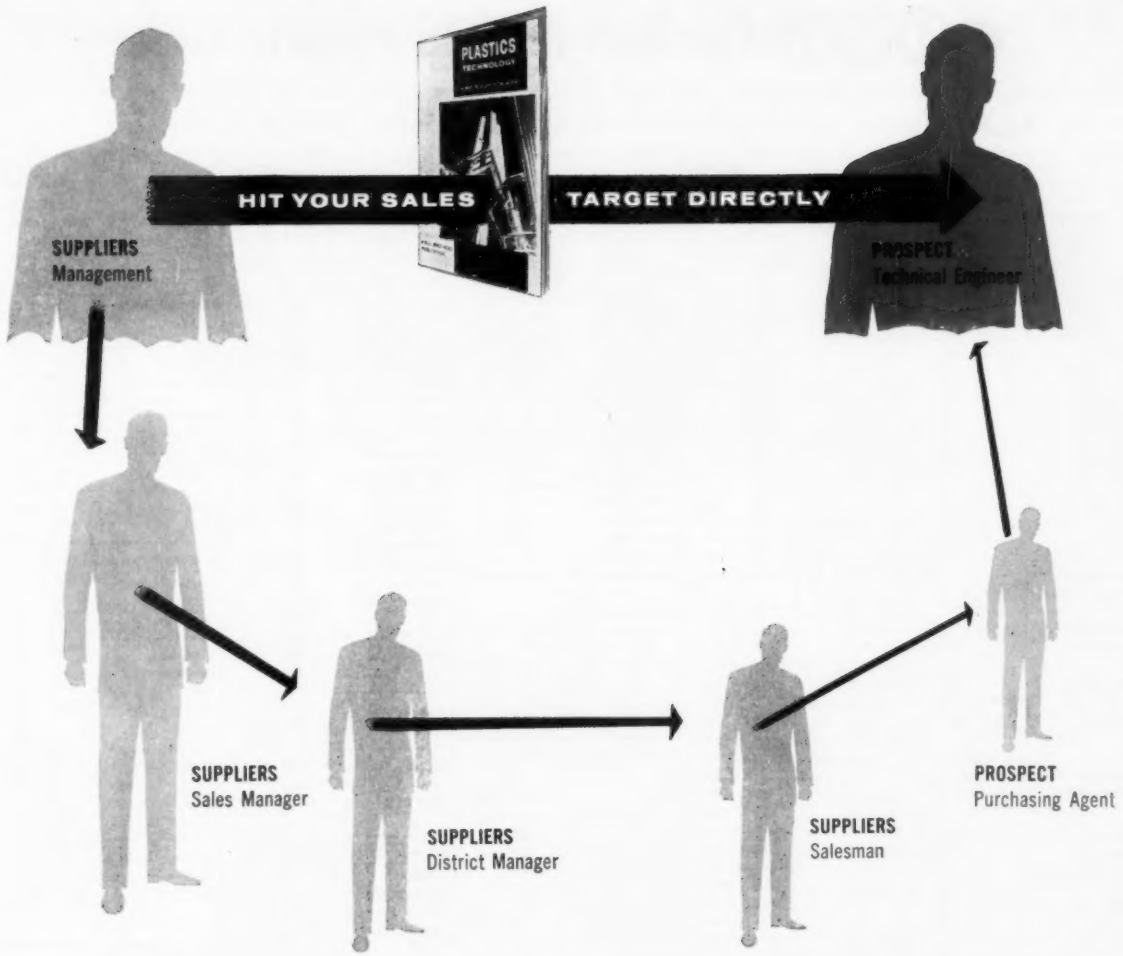

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SM S I C Chemicals & Allied Products—(Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 28 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Clark, Ind.	1	4.3
Will, Ill.	1	3.6
Sauk, Wis.	1	3.3
Schuylkill, Pa.	1	3.1
Hamilton, Tenn.	1	2.4
Sullivan, Tenn.	1	1.4
Passaic, N. J.	1	.9
Ulster, N. Y.	1	.9
Morris, N. J.	1	.9
Jasper, Mo.	3	.9
Vermillion, Ind.	1	.9
Madison, Ill.	1	.9
Jefferson, Ala.	2	.6
Hartford, Conn.	1	.5
Grundy, Ill.	1	.5
Berkeley, W. Va.	2	.5
Cochise, Ariz.	1	.5
Talladega, Ala.	1	.5
Total Above Counties	24	38.0
Industry Total	74	42.2
% of U. S.	32.4	90.0

2829—Industrial Organic Chemicals, N.E. C.

Kanawha, W. Va.	5	13.2
Salem, N. J.	2	8.2
East Baton Rouge, La.	2	4.8
Niagara, N. Y.	6	4.2
Brazoria, Tex.	2	4.2
Harris, Tex.	5	3.1
Sullivan, Tenn.	1	2.9
Galveston, Tex.	1	2.9
Orange, Tex.	2	2.5
Middlesex, N. J.	5	2.2
Union, N. J.	6	2.2
St. Louis City, Mo.	1	2.0
New Haven, Conn.	2	1.3
Putnam, W. Va.	2	1.3
Midland, Mich.	1	1.3
Lake, Ind.	2	1.0
Philadelphia, Pa.	7	.9
Nueces, Tex.	1	.8
Victoria, Tex.	1	.8
Allegheny, Pa.	1	.7
Total Above Counties	55	60.5
Industry Total	275	77.4
% of U. S.	20.0	78.2

2831—Biological Products

Alameda, Cal.	2	.6
Boone, Ind.	2	.3
Delaware, Pa.	1	.3
Los Angeles, Cal.	5	.3
Webster, Iowa	1	.2
Wyandotte, Kan.	4	.2
Buchanan, Mo.	3	.2
Lancaster, Pa.	1	.2
Wayne, Mich.	1	.2
Douglas, Neb.	4	.1
Cumberland, N. J.	3	.1
Total Above Counties	27	2.7
Industry Total	93	3.6
% of U. S.	29.0	75.0

2833—Medicinal Chemicals including Botanicals

St. Louis City, Mo.	2	2.0
Union, N. J.	2	2.0
New London, Conn.	1	1.0
Northumberland, Pa.	1	.6
Rockingham, Va.	1	.6
Onondaga, N. Y.	1	.6
Hudson, N. J.	4	.5
Mercer, N. J.	1	.4
Monroe, N. Y.	1	.4
Cook, Ill.	11	.3
Essex, N. J.	3	.2
Bergen, N. J.	6	.2
Middlesex, N. J.	2	.2
Lee, Iowa	1	.2
Chenango, N. Y.	1	.2
Los Angeles, Cal.	11	.1
Total Above Counties	49	9.5
Industry Total	115	10.2
% of U. S.	42.6	93.1

2834—Pharmaceutical Preparations

Marion, Ind.	11	7.3
Kings, N. Y.	37	6.3
Wayne, Mich.	25	5.5
Philadelphia, Pa.	53	4.7
Rockland, N. Y.	3	4.4
Lake, Ill.	1	3.4
Middlesex, N. J.	4	3.2
Cook, Ill	57	2.9
Kalamazoo, Mich.	2	2.9
Essex, N. J.	23	2.7
St. Louis City, Mo.	31	2.1
Elkhart, Ind.	3	2.0
Union, N. J.	4	1.9
Los Angeles, Cal.	78	1.8
Westchester, N. Y.	17	1.6
New York, N. Y.	84	1.5
Rensselaer, N. Y.	2	1.2
Hamilton, Ohio	11	1.1
Shelby, Tenn.	6	1.1
Chester, Pa	2	.8
Total Above Counties	454	58.4
Industry Total	1,163	82.3
% of U. S.	39.0	71.0

2841—Soap and Glycerin

Hudson, N. J.	8	4.9
Cook, Ill.	25	3.0
Hamilton, Ohio	6	2.0
Wyandotte, Kan.	3	1.7
Clark, Ind.	1	1.6
Los Angeles, Cal.	17	1.2
Baltimore City, Md.	6	1.2
Lake, Ind.	1	1.1
Alameda, Cal.	6	.8
Middlesex, Mass.	11	.8
Richmond, N. Y.	1	.7
Philadelphia, Pa.	14	.5
St. Louis City, Mo.	8	.5
Dallas, Tex.	8	.4
Norfolk, Mass.	4	.4
Camden, N. J.	3	.4
Union, N. J.	3	.4
Fulton, Ga.	6	.3
New York, N. Y.	7	.2
Montgomery, Ohio	2	.2
Total Above Counties	138	22.3
Industry Total	289	24.8
% of U. S.	47.8	89.9

2842—Cleaning and Polishing Products

Cook, Ill.	82	1.5
Los Angeles, Cal.	94	1.4
Kings, N. Y.	38	1.1
Wayne, Mich.	33	.7
Racine, Wis.	1	.7
Union, N. J.	9	.7
St. Louis City, Mo.	31	.6
Marion, Ind.	8	.5
Philadelphia, Pa.	25	.4
Bergen, N. J.	11	.4
New York, N. Y.	35	.4
Middlesex, Mass.	15	.4
Morris, N. J.	2	.4
Hampshire, Mass.	1	.4
Suffolk, Mass.	23	.4
Cuyahoga, Ohio	37	.4
St. Louis, Mo.	5	.4
Hudson, N. J.	16	.3
Essex, Mass.	29	.3
Passaic, N. J.	10	.3
Total Above Counties	505	11.7
Industry Total	1,151	19.1
% of U. S.	43.9	61.3

2843—Sulfonated Oils and Assistants

Hudson, N. J.	5	.5
Philadelphia, Pa.	15	.3
Essex, N. J.	7	.2
Passaic, N. J.	5	.2
Polk, Ga.	1	.2
Hamilton, Tenn.	1	.2
Essex, Mass.	7	.1
Total Above Counties	41	1.7
Industry Total	103	2.4
% of U. S.	39.8	70.8

2851—Paints and Varnishes

Cook, Ill.	106	7.3
Los Angeles, Cal.	123	3.4
Cuyahoga, Ohio	53	3.4
Wayne, Mich.	38	2.8
Essex, N. J.	54	2.8
Philadelphia, Pa.	42	2.7
Kings, N. Y.	88	1.8
Middlesex, N. J.	12	1.5
Jefferson, Ky.	19	1.4
San Francisco, Cal.	23	1.3
Allegheny, Pa.	18	1.3
Queens, N. Y.	26	1.2
St. Louis City, Mo.	28	1.2
Middlesex, Mass.	19	1.1
Milwaukee, Wis.	10	1.1
Clay, Mo.	7	1.1
Baltimore City, Md.	22	1.0
Hudson, N. J.	26	.8
Alameda, Cal.	25	.8
Harris, Tex.	15	.8
Total Above Counties	756	38.8
Industry Total	1,469	60.7
% of U. S.	51.5	63.9

2852—Inorganic Color Pigments

Middlesex, N. J.	4	1.7
St. Louis, Mo.	2	1.4
Carbon, Pa.	2	1.2
Baltimore City, Md.	2	.8
New Castle, Del.	1	.8
Warren, N. Y.	1	.8
Northampton, Pa.	2	.4
Montgomery, Kan.	1	.4
St. Clair, Ill.	1	.4
Camden, N. J.	1	.4
Amherst, Va.	1	.4
Lorain, Ohio	1	.4
Essex, N. J.	6	.3
Montgomery, Ill.	2	.2
Kings, N. Y.	4	.2
Mercer, N. J.	1	.2
Philadelphia, Pa.	2	.2
Bureau, Ill.	1	.2
Jasper, Mo.	1	.2
Cherokee, Kan.	1	.2
Total Above Counties	37	10.8
Industry Total	104	13.0
% of U. S.	35.6	83.1

2853—Whiting and Fillers

Shelby, Tenn.	2	.2
Cook, Ill.	12	.1
Cuyahoga, Ohio	6	.1
Total Above Counties	20	.4
Industry Total	98	1.4
% of U. S.	20.4	28.8

2861—Hardwood Distillation

Dickinson, Mich.	1	.5
Marquette, Mich.	1	.4
Hickman, Tenn.	1	.2
Ashley, Ark.	1	.2
Shelby, Tenn.	1	.2
Total Above Counties	5	1.5
Industry Total	34	1.6
% of U. S.	14.7	93.8

2862—Softwood Distillation

Forrest, Miss.	2	1.1
Glynn, Ga.	1	.8
Escambia, Fla.	1	.5
Pearl River, Miss.	1	.5
Allen, La.	1	.5
Beauregard, La.	1	.5
Duval, Fla.	1	.2
Covington, Ala.	1	.2
Harrison, Miss.	1	.2
Calcasieu, La.	1	.2
Marion, Miss.	1	.2
Total Above Counties	12	4.9
Industry Total	27	5.2
% of U. S.	44.4	94.2

2863—Gum Naval Stores

There are no counties with 100 or more employees in this industry.		
Industry Total	26	.5

2865—Tanning and Dyeing Materials

Baltimore City, Md.	1	.2
Davidson, Tenn.	1	.2
Total Above Counties	2	.4
Industry Total	30	.6
% of U. S.	6.7	66.7

2871—Fertilizers

Polk, Fla.	8	1.2
Harris, Tex.	4	1.0
Middlesex, N. J.	3	.8
Baltimore City, Md.	5	.7
St. Clair, Ill.	6	.7
Charleston, S. C.	6	.7
Hillsborough, Fla.	2	.7
Davidson, Tenn.	4	.6
Hamilton, Ohio	5	.5
South Norfolk City, Va.	5	.5

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Manufacture of Chemicals & Allied Products—S.I.C. 28 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 28 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Marion, Ind.	5	.4
Franklin, Ohio	4	.4
Cook, Ill.	4	.4
Chatham, Ga.	5	.4
Fulton, Ga.	5	.4
Philadelphia, Pa.	1	.4
Norfolk City, Va.	1	.4
Deer Lodge, Mont.	1	.4
Jefferson, La.	2	.3
Brunswick, N. C.	2	.3
Total Above Counties	74	11.2
Industry Total	260	19.2
% of U. S.	28.5	58.3

2872—Fertilizers, Mixing Only

Baltimore City, Md.	5	.4
Los Angeles, Cal.	21	.4
New Hanover, N. C.	7	.3
Hillsborough, Fla.	7	.3
Alameda, Cal.	5	.2
Polk, Fla.	6	.2
Anne Arundel, Md.	2	.2
Clark, Ind.	1	.2
Portsmouth City, Va.	1	.2
Jefferson, Ky.	4	.2
South Norfolk City, Va.	4	.2
Terrell, Ga.	1	.2
Norfolk City, Va.	3	.2
Martin, N. C.	1	.2
Charleston, S. C.	5	.2
Alameda, Cal.	5	.2
Duval, Fla.	4	.1
Richland, S. C.	2	.1
Aroostook, Me.	6	.1
Winona, Minn.	2	.1
Total Above Counties	87	4.2
Industry Total	580	12.2
% of U. S.	15.0	34.4

2881—Cottonseed Oil Mills

Shelby, Tenn.	8	.6
Fresno, Cal.	3	.4
Lubbock, Tex.	3	.4
Hinds, Miss.	4	.3
Pulaski, Ark.	4	.2
Richmond, Ga.	3	.2
Tarrant, Tex.	2	.2
Montgomery, Ala.	3	.2
Coahoma, Miss.	2	.2
Leflore, Miss.	3	.2
Washington, Miss.	4	.2
Bibb, Ga.	3	.2
Terrell, Ga.	1	.1
Los Angeles, Cal.	1	.1
Nolan, Tex.	1	.1
Madera, Cal.	2	.1
Kern, Cal.	2	.1
Dallas, Ala.	2	.1
Fulton, Ga.	3	.1
Total Above Counties	58	4.5
Industry Total	266	10.9
% of U. S.	20.3	41.3

2882—Linseed Oil Mills

Hennepin, Minn.	3	.5
Erie, N. Y.	1	.2
Cuyahoga, Ohio	1	.2
Anoka, Minn.	1	.2
Total Above Counties	6	1.1
Industry Total	12	1.2
% of U. S.	50.0	91.7

2883—Soybean Oil Mills

Macon, Ill.	5	1.4
Cook, Ill.	4	.5
Vermilion, Ill.	1	.4
Bergen, N. J.	1	.4
Adams, Ind.	1	.4
Ford, Ill.	1	.4
Buchanan, Mo.	2	.3
Wright, Iowa	2	.2
Blue Earth, Minn.	2	.2
Lake, Ohio	1	.2
Polk, Iowa	2	.2
Hamilton, Ohio	1	.2
Marion, Ohio	1	.2
Marion, Ind.	1	.2
Jefferson, Ky.	1	.2
Clinton, Iowa	1	.2
McLean, Ill.	2	.1
Linn, Iowa	2	.1
Total Above Counties	31	5.8
Industry Total	88	7.5
% of U. S.	35.2	77.3

2884—Vegetable Oil Mills, N.E.C.

Morris, N. J.	1	.8
Hudson, N. J.	3	.4
St. Louis City, Mo.	1	.2
Norfolk City, Va.	1	.2
Jackson, Fla.	1	.2
Los Angeles, Cal.	5	.1
Total Above Counties	12	1.9
Industry Total	51	2.6
% of U. S.	23.5	73.1

2886—Grease and Tallow

Queens, N. Y.	4	.9
Cook, Ill.	6	.7
Hudson, N. J.	6	.7
Los Angeles, Cal.	9	.6
Wayne, Mich.	6	.6
Philadelphia, Pa.	7	.5
Peoria, Ill.	1	.2
Hamilton, Ohio	2	.2
Franklin, Ohio	1	.2
Marion, Ind.	1	.2
Cuyahoga, Ohio	3	.2
Onondaga, N. Y.	2	.2
Webster, Iowa	2	.2
Middlesex, Mass.	6	.1
Erie, N. Y.	5	.1
Kings, N. Y.	4	.1
Essex, N. J.	5	.1
Suffolk, Mass.	2	.1
San Francisco, Cal.	4	.1
Total Above Counties	76	6.0
Industry Total	500	13.2
% of U. S.	15.2	45.5

2887—Fatty Acids

Cook, Ill.	3	.8
Hamilton, Ohio	1	.5
Philadelphia, Pa.	2	.3
Essex, N. J.	1	.3
Lake, Ind.	1	.2
Kankakee, Ill.	1	.2
Total Above Counties	9	2.3
Industry Total	15	2.4
% of U. S.	60.0	95.8

2889—Animal Oils, N.E.C.

Sussex, Del.	2	.3
Carteret, N. C.	3	.2
Monmouth, N. J.	1	.2
Wayne, Mich.	1	.2
Jefferson, Tex.	1	.1
Plaquemines, La.	2	.1
Brunswick, N. C.	2	.1
Cameron, La.	2	.1
Suffolk, N. Y.	2	.1
Northumberland, Va.	2	.1
Total Above Counties	18	1.5
Industry Total	61	2.3
% of U. S.	29.5	65.2

2891—Printing Ink

Cook, Ill.	39	2.0
Philadelphia, Pa.	21	.9
New York, N. Y.	25	.9
Alameda, Cal.	4	.5
Union, N. J.	7	.5
Bergen, N. J.	9	.5
Passaic, N. J.	4	.4
Hamilton, Ohio	8	.3
Cuyahoga, Ohio	8	.2
St. Louis City, Mo.	6	.2
Kings, N. Y.	14	.2
Hudson, N. J.	6	.2
Los Angeles, Cal.	15	.2
Total Above Counties	164	7.0
Industry Total	271	8.7
% of U. S.	60.5	80.5

2892—Essential Oils

New York, N. Y.	11	.1
Union, N. J.	2	.1
Total Above Counties	13	.2
Industry Total	37	.6
% of U. S.	35.1	33.3

2893—Toilet Preparations

New York, N. Y.	112	3.7
Cook, Ill.	67	2.5
Los Angeles, Cal.	73	1.6
Passaic, N. J.	6	1.2
Hamilton, Ohio	5	1.1
Essex, N. J.	14	1.1
Bronx, N. Y.	12	1.0
Union, N. J.	5	.9
Fairfield, Conn.	7	.8
Ramsey, Minn.	8	.8
Rockland, N. Y.	1	.7
Hudson, N. J.	13	.7
Queens, N. Y.	16	.7
Orange, N. Y.	4	.5
Nassau, N. Y.	6	.5
Middlesex, Conn.	2	.4
Logan, Ill.	1	.4
Morris, N. J.	1	.4
Kings, N. Y.	25	.4
Suffolk, Mass.	3	.4
Total Above Counties	381	19.8
Industry Total	710	25.9
% of U. S.	53.7	76.4

2894—Glue and Gelatine

Cook, Ill.	26	1.0
Middlesex, Mass.	12	.9
Essex, Mass.	6	.7
Philadelphia, Pa.	13	.5
Milwaukee, Wis.	5	.4
Cattaraugus, N. Y.	1	.4
Kings, N. Y.	10	.4
New York, N. Y.	12	.3
Wayne, Mich.	3	.2
Berks, Pa.	1	.2
Union, N. J.	1	.2
San Mateo, Cal.	2	.2
Camden, N. J.	1	.2
Cuyahoga, Ohio	8	.1
Erie, N. Y.	2	.1
Total Above Counties	103	5.8
Industry Total	230	7.6
% of U. S.	44.8	76.3

2895—Carbon Black

Hutchinson, Tex.	3	.7
Harris, Tex.	3	.3
Ouachita, La.	2	.3
St. Martin, La.	3	.3
Grant, Kan.	2	.2
Arkansas, Tex.	1	.2
Ector, Tex.	1	.2
Lea, N. M.	4	.2
Evangeline, La.	1	.2
Gray, Tex.	4	.2
Montgomery, Tex.	1	.2
Moore, Tex.	2	.2
Total Above Counties	27	3.2
Industry Total	47	3.9
% of U. S.	57.4	82.1

2896—Compressed and Liquefied Gases

Hudson, N. J.	7	.7
Los Angeles, Cal.	11	.5
Jefferson, Ky.	2	.5
Cook, Ill.	9	.5
Harris, Tex.	7	.4
Cuyahoga, Ohio	5	.4
St. Louis City, Mo.	7	.3
Delaware, Pa.	2	.3
Baltimore City, Md.	6	.3
Allegheny, Pa.	7	.3
Erie, N. Y.	6	.3
Philadelphia, Pa.	4	.3
Essex, N. J.	2	.3
Wayne, Mich.	7	.3
Armstrong, Pa.	1	.3
Lake, Ind.	3	.2
Prince Georges, Md.	2	.2
Alameda, Cal.	6	.2
Denver, Col.	7	.2
Hamilton, Ohio	6	.1
Total Above Counties	107	6.6
Industry Total	428	13.0
% of U. S.	25.0	50.8

2897—Insecticides and Fungicides

Adams, Col.	1	.6
Harris, Tex.	4	.4
Niagara, N. Y.	2	.4
Los Angeles, Cal.	13	.3
Contra Costa, Cal.	3	.3
Baltimore City, Md.	4	.3
Duval, Fla.	2	.2
Allegheny, Pa.	1	.2
Henrico, Va.	1	.1
Jefferson, Ky.	2	.1
Hillsborough, Fla.	3	.1

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SM SIC Chemicals & Allied Products—(Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 28 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Fresno, Cal.	2	.1
Total Above Counties	38	3.1
Industry Total	265	6.0
% of U. S.	14.3	51.7
2899—Salt		
Alameda, Cal.	4	.5
Manistee, Mich.	2	.5
Reno, Kans.	3	.5
St. Clair, Mich.	2	.5
Wayne, Ohio	1	.4
Van Zandt, Tex.	1	.4
Schuyler, N. Y.	2	.3
Wyoming, N. Y.	1	.2
Summit, Ohio	1	.2
Salt Lake, Utah	1	.2
Tompkins, N. Y.	2	.2
Total Above		
Counties	20	3.9
Industry Total	38	4.1
% of U. S.	52.6	95.1
2899—Chemical Products, N. E. C.		
Cook, Ill.	99	2.7
Cuyahoga, Ohio	46	1.6
Los Angeles, Cal.	80	1.3
New York, N. Y.	53	.9
Fairfield, Conn.	7	.8
Lake, Ohio	2	.8
Vigo, Ind.	3	.8
Hudson, N. J.	20	.6
Queens, N. Y.	18	.6
Kings, N. Y.	37	.6
Montgomery, Pa.	6	.6
Philadelphia, Pa.	36	.6
Middlesex, Mass.	14	.6
Essex, N. J.	23	.5
Allegheny, Pa.	15	.5
Butler, Pa.	1	.5
Washington, Minn.	1	.5
St. Louis, Mo.	6	.4
Harris, Tex.	15	.3
Wayne, Mich.	23	.3
Total Above Counties	505	15.5
Industry Total	1,204	26.7
% of U. S.	41.9	58.1

Manufacture of Petroleum & Coal Products—S.I.C. 29

SM Estimate of 100 Counties with 92.0% of 1957 Employment

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Jefferson, Tex.	9	17.9
Lake, Ind.	11	14.4
Harris, Tex.	21	13.0
Los Angeles, Cal.	80	11.5
Contra Costa, Cal.	6	7.3
Philadelphia, Pa.	21	7.3
East Baton Rouge, La.	4	7.0
Delaware, Pa.	3	6.3
Madison, Ill.	7	6.1
Union, N. J.	12	5.3
Allegheny, Pa.	17	5.1
Hudson, N. J.	13	4.6
Cook, Ill.	55	4.0
Calcasieu, La.	4	3.6
Wayne, Mich.	35	3.4
Will, Ill.	8	3.3
Galveston, Tex.	4	3.3
Gloucester, N. J.	4	3.2
Lucas, Ohio	8	2.8
Cuyahoga, Ohio	35	2.7
Erie, N. Y.	10	2.7
Jefferson, Ala.	10	2.5
Baltimore, Md.	3	2.3
Tulsa, Okla.	7	2.3
Stephens, Okla.	2	2.1
Kay, Okla.	2	2.0
Jackson, Mo.	5	1.9
Union, Ark.	7	1.8
St. Charles, La.	2	1.8
El Paso, Tex.	2	1.7
Hamilton, Ohio	7	1.6
Hutchinson, Tex.	4	1.5
Middlesex, N. J.	9	1.5
Natrona, Wyo.	3	1.4
Middlesex, Mass.	10	1.4
Butler, Kan.	5	1.4
Beaver, Pa.	4	1.3
Venango, Pa.	7	1.3
Nueces, Tex.	5	1.3
St. Louis, Mo.	8	1.2
McLennan, Tex.		1.1
Boyd, Ky.	2	1.1
Tarrant, Tex.	9	1.1
St. Clair, Ill.	3	.9
Mahoning, Ohio	3	.9
Salt Lake, Utah	8	.8
Brooke, W. Va.	1	.8
Utah, Utah	3	.8
Crawford, Ill.	1	.8
Lawrence, Ill.	3	.8
McKean, Pa.	4	.8
Cambria, Pa.	4	.8
New Hanover, N. C.	1	.8
Kings, N. Y.	11	.8
Allen, Ohio	2	.7
Caddo, La.	5	.7
Carlton, Minn.	1	.7
Milwaukee, Wis.	9	.7
Butler, Pa.	4	.7
Yellowstone, Mont.	3	.7
Hancock, W. Va.	2	.6
Kern, Cal.	10	.6
Bergen, N. J.	3	.6
Skagit, Wash.		.6
Norfolk, Mass.	5	.6
Kanawha, W. Va.	5	.6
Bucks, Pa.	2	.6
Garfield, Okla.	1	.5
Jefferson, La.	5	.5
Chatham, Ga.	7	.5
Stark, Ohio	6	.5
Mobile, Ala.	2	.5
Sedgwick, Kan.	2	.5
Northampton, Pa.	3	.5
Montgomery, Pa.	4	.5
Somerset, N. J.	4	.5
Oklahoma, Okla.	8	.5
Montgomery, Kan.	3	.5
San Bernardino, Cal.	4	.4
Essex, N. J.	13	.4
Wyandotte, Kan.	6	.4
Allegany, N. Y.	2	.4
Lorain, Ohio	1	.4
Ramsey, Minn.	9	.4
St. Louis, Minn.	3	.4
Alameda, Cal.	9	.4
York, Pa.	7	.4
Orleans, La.	2	.4
Pueblo, Colo.	1	.4
Cattaraugus, N. Y.	1	.4
Lake, Ill.	2	.4
Warren, Pa.	3	.4
Fresno, Cal.	3	.4
Davis, Utah	3	.4
Rock Island, Ill.		.4
Carbon, Wyo.	1	.4
Marion, Ind.	8	.4
Dallas, Tex.	8	.4
Licking, Ohio	3	.3
Gratiot, Mich.	2	.3
Total Above Counties	747	201.9
% of U.S.A. Total	54.1	92.0

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 29

Although the coke and by-products group of industries has been re-classified into 4-digit industry 3312 (blast furnaces, steel works and rolling mills) by the S.I.C. technical committee, its classification is continued in the code 293 under 5-digit codes 29321, 29322 and 29323. We include these industries here to keep their identity from being submerged in the blast furnace classification 3312. Firms manufacturing and distributing gas to consumers are classified in public utilities industries.

The highest gain in petroleum refining and related industries occurred in paving mixtures and blocks, where product values went up 41% between 1954 and 1958. Acceleration of highway building under new federal and state programs undoubtedly is further stimulating this industry.

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Manufacture of Petroleum & Coal Products—S.I.C. 29 (Cont'd)

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 29

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales: Value Products Shipped ($ million) 1954 Census	Gross Sales: Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
2911	Petroleum refining	409	11,757	14,228	153.1	155.2
295	*Paving and roofing materials*					
2951	Paving mixtures and blocks	326	126	178	4.4	5.3
2952	Roofing felts and coatings	197	401	413	15.7	15.8
299	*Petroleum and coal products, n. e. c.*					
2992	Lubricants, n. e. c.	283	224	262	8.2	9.4
2999	Petroleum and coal prod., n. e. c.	47	56	71	2.0	2.3
293	*Coke and by-products*					
2931	Beehive coke ovens	40	9	11	.6	.7
2932	By-product coke ovens	79	1,241	1,489	31.9	30.7

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SM S I C Petroleum & Coal Products—S.I.C. 29 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 29

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
2911—Petroleum Refining		
Jefferson, Tex.	7	17.9
Harris, Tex.	12	11.9
Lake, Ind.	5	10.5
Los Angeles, Cal.	30	10.0
Contra Costa, Cal.	4	7.0
East Baton Rouge, La.	3	6.9
Delaware, Pa.	2	6.2
Philadelphia, Pa.	3	5.8
Madison, Ill.	3	5.6
Union, N. J.	2	5.0
Calcasieu, La.	4	3.5
Galveston, Tex.	4	3.3
Gloucester, N. J.	2	3.2
Kay, Okla.	2	2.0
Will, Ill.	2	2.0
Baltimore City, Md.	4	1.9
St. Charles, La.	2	1.8
Hutchinson, Tex.	4	1.8
Butler, Kan.	5	1.7
Jackson, Mo.	1	1.3
Total Above Counties	101	109.3
Industry Total	409	155.2
% of U. S.	24.7	70.4
2931—Beehive Coke Ovens		
Fayette, Pa.	15	.2
Westmoreland, Pa.	10	.1
Total Above Counties	25	.3
Industry Total	40	.7
% of U. S.	62.5	42.9
2932—Byproduct Coke Ovens		
Allegheny, Pa.	3	4.3
Lake, Ind.	3	3.5
Jefferson, Ala.	5	1.8
Erie, N. Y.	3	1.7
Wayne, Mich.	4	1.3
Baltimore, Md.	1	1.3
Beaver, Pa.	2	1.3
Cook, Ill.	4	1.0
Middlesex, Mass.	1	.7
Mahoning, Ohio	3	.9
Utah, Utah	2	.9
Cuyahoga, Ohio	3	.8
Brooke, W. Va.	1	.7
Hancock, W. Va.	1	.7
Cambria, Pa.	1	.7
Hudson, N. J.	1	.6
New Haven, Conn.	1	.4
Dauphin, Pa.	1	.4
Lucas, Ohio	1	.4
Trumbull, Ohio	1	.4
Total Above Counties	42	23.3
Industry Total	79	30.7
% of U. S.	53.2	75.9
2951—Paving Mixtures & Blocks		
Los Angeles, Cal.	13	.3
Cook, Ill.	4	.3
Prince Georges, Md.	2	.2
Kankakee, Ill.	1	.2
Jefferson, Ala.	2	.1
Middlesex, Mass.	3	.1
Washington, Md.	1	.1
Wayne, Mich.	3	.1
St. Louis, Mo.	2	.1
Total Above Counties	31	1.5
Industry Total	328	5.3
% of U. S.	9.5	28.3
2952—Roofing Felts and Coating		
Cook, Ill.	15	1.3
Hamilton, Ohio	1	1.0
Los Angeles, Cal.	12	.9
Will, Ill.	4	.8
Bergen, N. J.	1	.7
Somerset, N. J.	2	.5
Philadelphia, Pa.	4	.5
Cuyahoga, Ohio	8	.4
Dallas, Tex.	5	.4
Hennepin, Minn.	5	.4
Norfolk, Mass.	2	.4
Lake, Ill.	1	.4
Orleans, La.	1	.4
Alameda, Cal.	3	.4
York, Pa.	4	.3
Contra Costa, Cal.	2	.3
Chatham, Ga.	2	.3
Jackson, Md.	2	.3
Fairfield, Conn.	1	.2
Multnomah, Ore.	6	.2
Total Above Counties	81	10.1
Industry Total	197	15.8
% of U. S.	41.1	63.9
2992—Lubricants, N. E. C.		
Camden, N. J.	2	1.0
Cook, Ill.	25	.9
Cuyahoga, Ohio	17	.8
Philadelphia, Pa.	11	.6
Tarrant, Tex.	3	.4
Los Angeles, Cal.	24	.4
Montgomery, Pa.	1	.4
Essex, N. J.	4	.3
Jefferson, La.	3	.3
Allegheny, Pa.	7	.2
Union, N. J.	6	.2
Wayne, Mich.	13	.2
Sedgwick, Kan.	1	.2
Milwaukee, Wis.	7	.2
Middlesex, N. J.	2	.2
Montgomery, Ohio	1	.2
Oklahoma, Okla.	1	.2
Erie, N. Y.	2	.1
St. Louis City, Mo.	11	.1
Venango, Pa.	2	.1
Total Above Counties	143	7.0
Industry Total	326	9.4
% of U. S.	43.9	74.5
2999—Petroleum and Coal Products, N. E. C.		
St. Louis City, Mo.	4	.4
Cook, Ill.	3	.2
Allegheny, Pa.	2	.2
Jefferson, Tex.	1	.2
Jackson, Mich.	1	.2
Will, Ill.	1	.2
Middlesex, N. J.	2	.1
McDowell, W. Va.	1	.1
Harris, Tex.	1	.1
Wayne, Mich.	2	.1
Total Above Counties	18	1.8
Industry Total	47	2.3
% of U. S.	38.3	78.3

Manufacture of Rubber Products—S.I.C. 30

SM Estimates for 100 Counties with 93.1% of 1957 Employment

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Summit, Ohio	47	47.2
Los Angeles, Cal.	133	15.8
Middlesex, Mass.	29	11.3
New Haven, Conn.	20	9.4
Wayne, Mich.	20	8.1
New Castle, Del.	1	6.2
Passaic, N. J.	14	5.8
Montgomery, Ohio	7	5.7
Bristol, Mass.	9	5.5
St. Joseph, Ind.	5	5.4
Denver, Colo.	4	5.2
Montgomery, Pa.	8	4.8
Cook, Ill.	76	4.5
Mercer, N. J.	14	4.4
Shelby, Tenn.	6	4.3
Providence, R. I.	12	4.0
Norfolk, Mass.	17	3.6
Eau Claire, Wisc.	1	3.5
Etowah, Ala.	1	3.4
Erie, N. Y.	12	3.3
Hampden, Mass.	6	3.2
Fairfield, Conn.	20	3.2
Philadelphia, Pa.	30	2.8
Richland, Ohio	2	2.7
Marion, Ind.	7	2.5
Polk, Iowa	4	2.3
Allegany, Md.	1	2.1
Auglaize, Ohio	4	2.1
Allen, Ind.	2	2.p
Wayne, N. Y.	1	2.0
Hancock, Ohio	2	1.9
Broome, N. Y.	4	1.8
Baltimore, Md.	1	1.8
Stark, Ohio	9	1.6
Shawnee, Kan.	1	1.6
Wabash, Ind.	2	1.5
Morris, N. J.	7	1.5
Hamilton, Ind.	1	1.5
Harford, Md.	1	1.4
Jackson, Mich.	1	1.4
Orange, Cal.	8	1.4
Ottawa, Okla.	2	1.4
Lake, Ohio	5	1.3
Ashland, Ohio	6	1.3
Portage, Ohio	8	1.3
Erie, Pa.	3	1.3
Suffolk, Mass.	16	1.3
Tuscaloosa, Ala.	1	1.2
Rock Island, Ill.	3	1.2
Geauga, Ohio	4	1.2
Bristol, R. I.	4	1.2
Gibson, Tenn.	1	1.2
Mahoning, Ohio	5	1.2
Elkhart, Ind.	10	1.1
Oakland, Mich.	5	1.1

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The rankings shown here represent a small part of the available material. Complete county listings may be obtained at a nominal cost from Market Statistics, Inc., 432 Fourth Ave., New York 16, N. Y. Murray Hill 4-3559

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SM SIC Manufacture of Rubber Products—S.I.C. 30 (Cont'd)

SM Estimates for 100 Counties with 91.3% of 1957 Employment (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Essex, Mass.	15	1.1	Colbert, Ala.	2	.8	Hennepin, Minn.	15	.7	Marion, Mo.	1	.6	Cecil, Md.	1	.4
McLennan, Tex.	1	1.1	Tippecanoe, Ind.	1	.8	New Castle, Del.	3	.6	Huron, Ohio	4	.5	Chester, Pa.	3	.4
Westmoreland Pa.	5	1.0	Middlesex, Conn.	4	.8	Kent, Mich.	6	.6	Crawford, Ohio	2	.5	Cass, Ind.	1	.4
Medina, Ohio	1	1.0	Middlesex, N. J.	7	.7	Worcester, Mass.	7	.6	Lee, Iowa	1	.5	Contra Costa, Cal.	1	.4
Alameda, Cal.	21	1.0	Carroll, Md.	1	.7	Dutchess, N. Y.	3	.6	Sandusky, Ohio	2	.5	St. Clair, Ill.	2	.4
Queens, N. Y.	9	.9	Windsor, Vt.	2	.7	Delaware, Ind.	2	.6	Cumberland, Pa.	1	.5			
Adams, Miss.	1	.9	Somerset, N. J.	1	.7	Sullivan, N. H.		.6	Hudson, N. J.	11	.5	Total Above Counties	850	250.9
Kings, N. Y.	31	.9	Wayne, Ohio	3	.7	Ottawa, Ohio		.6	Harris, Tex.	8	.5			
Lancaster, Nebr.	1	.8	Cuyahoga, Ohio	13	.7	Bucks, Pa.	6	.6	De Kalb, Ind.	2	.4			
La Crosse, Wisc.	2	.8	Essex, N. J.	19	.7	Camden, N. J.	4	.6	Wexford, Mich.	1	.4	% of U.S.A. Total	60.5	93.1

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 30

All four classifications in this industry made strong advances, with rubber footwear scoring the sharpest percentage increase—up 36% over 1954. The largest dollar gain was in tires and inner tubes, up almost a half-billion dollars. Companies engaged primarily in rebuilding and retreading tires are classified under code number 7534 (tire repair shops). Those engaged in the assembly and wholesale sale of scrap rubber are classified in trade industries. The manufacture of elastic webbing is classified in S.I.C. 22, products made of elastic webbing and garments made from rubberized fabrics in S.I.C. 23, and synthetic rubber under code number 2822.

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	Gross Sales Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
3011	Tires and inner tubes	49	1,842	2,339	92.7	103.5
3021	Rubber footwear	22	166	226	18.3	16.8
3031	Reclaimed rubber	20	39	50	3.0	3.4
3099	Rubber industries, n. e. c.	1,315	1,677	2,048	132.5	143.7

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 30

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
3011—Tires and Inner Tubes		
Summit, Ohio	6	38.8
Los Angeles, Cal.	6	11.1
Wayne, Mich.	1	7.9
Montgomery, Pa.	3	4.6
Shelby, Tenn.	1	4.3
Eau Claire, Wis.	1	3.7
Etowah, Ala.	1	3.6
Hampden, Mass.	1	3.4
Richland, Ohio	1	2.8
Polk, Iowa	2	2.5
Allegany, Md.	1	2.3
Shawnee, Kan.	1	1.7
Erie, N. Y.	1	1.6
Marion, Ind.	1	1.6
Ottawa, Okla.	1	1.5
Jackson, Mich.	1	1.5
Tuscaloosa, Ala.	1	1.2
New Haven, Conn.	1	1.1
McLennan, Tex.	1	1.1
Adams, Miss.	1	.8
Total Above Counties	33	97.1
Industry Total	49	103.5
% of U. S.	67.3	93.8
3021—Rubber Footwear		
Middlesex, Mass.	2	6.3
Harford, Md.	1	1.7
New Haven, Conn.	1	1.3
Broome, N. Y.	2	.9
Essex, Mass.	2	.9
Bristol, R. I.	1	.9
Middlesex, Conn.	1	.9
Rock Island, Ill.	1	.9
La Crosse, Wis.	1	.8
Carroll, Md.	1	.8
Gibson, Tenn.	1	.8
Adams, Pa.	1	.6
Orange, Cal.	1	.5
Norfolk, Mass.	1	.5
Hamilton, Ohio	1	.3
Davidson, Tenn.	1	.3
Providence, R. I.	1	.3
Total Above Counties	20	18.7
Industry Total	22	18.8
% of U. S.	90.9	99.4
3031—Reclaimed Footwear		
Summit, Ohio	3	1.3
Erie, N. Y.	2	.6
Morris, N. J.	1	.4
Los Angeles, Cal.	3	.2
St. Clair, Ill.	1	.2
Shelby, Tenn.	1	.2
Hancock, Ohio	1	.2
Total Above Counties	12	3.1
Industry Total	19	3.4
% of U. S.	63.2	91.2
3099—Rubber Industries, N. E. C.		
Summit, Ohio	37	12.6
New Castle, Del.	3	6.0
St. Joseph, Ind.	5	5.3
Passaic, N. J.	14	5.3
Middlesex, Mass.	27	5.0
Montgomery, Ohio	6	4.9
Bristol, Mass.	8	4.7
Los Angeles, Cal.	124	4.6
Cook, Ill.	78	4.5
Denver, Col.	3	4.4
Providence, R. I.	11	4.0
Mercer, N. J.	13	3.7
Fairfield, Conn.	20	3.5
Philadelphia, Pa.	29	2.8
Norfolk, Mass.	16	2.8
New Haven, Conn.	18	2.4
Auglaize, Ohio	4	2.1
Wayne, N. Y.	1	2.0
Allen, Ind.	3	2.0
Baltimore City, Md.	9	1.6
Total Above Counties	427	84.2
Industry Total	1,315	143.7
% of U. S.	32.5	58.6

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Manufacture of Leather & Leather Products—S.I.C. 31

SM Estimates for 100 Counties with 79.0% of 1957 Employment

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Essex, Mass.	398	23.3	Franklin, Me.	10	3.0	Bristol, Mass.	18	1.7	Tioga, Pa.	2	1.0	Lehigh, Pa.	5	.7
New York, N. Y.	982	21.3	Lancaster, Pa.	21	2.9	Fairfield, Conn.	23	1.7	Lycoming, Pa.	9	1.0	Richland, Ill.	1	.7
Broome, N. Y.	44	12.4	York, Me.	14	2.8	Adams, Pa.	7	1.6	Perry, Mo.	2	1.0	Washington, Md.	4	.7
Middlesex, Mass.	90	11.1	Campbell, Va.	7	2.7	Davidson, Tenn.	12	1.6	Schuylkill, Pa.	7	1.0	Coles, Ill.	4	.7
Kings, N. Y.	267	10.4	Somerset, Me.	8	2.6	Baltimore, Md.	1	1.5	Cole, Mo.	3	1.0	San Mateo, Cal.	9	.7
St. Louis, Mo.	6	9.6	Queens, N. Y.	33	2.4	Rock, Wis.	2	1.5	Lebanon, Pa.	8	1.0	St. Francois, Mo.	3	.7
Hillsborough, N. H.	47	9.6	Luzerne, Pa.	14	2.4	Cape Girardeau, Mo.	2	1.5	Wayne, Mich.	13	.9	Jackson, Ill.	1	.7
Cook, Ill.	184	9.4	Franklin, Ohio	17	2.3	Sheboygan, Wis.	9	1.4	Merrimack, N. H.	7	.9	Cooke, Tex.	3	.7
Worcester, Mass.	52	9.1	Berks, Pa.	13	2.0	Blair, Pa.	4	1.4	Goodhue, Minn.	5	.9	Madison, Ill.	2	.7
Plymouth, Mass.	107	9.0	New Castle, Del.	11	2.0	Saline, Mo.	3	1.4	Camden, N. J.	8	.9	Jefferson, Mo.	1	.7
Androscoggin, Me.	41	7.3	Penobscot, Me.	14	2.0	Marion, Mo.	3	1.2	New London, Conn.	12	.9	Hampden, Mass.	8	.6
Philadelphia, Pa.	110	6.7	Dauphin, Pa.	9	2.0	Oxford, Me.	5	1.2	Ottawa, Mich.	3	.8	Scott, Mo.	2	.6
Milwaukee, Wis.	62	6.4	Hamilton, Ohio	28	2.0	Grafton, N. H.	7	1.2	Randolph, Mo.	1	.8	Franklin, N. Y.	9	.6
Suffolk, Mass.	144	6.3	Norfolk, Mass.	18	1.9	Gwinnett, Ga.	5	1.2	Jackson, Mo.	8	.8	Fond du Lac, Wis.	4	.6
Fulton, N. Y.	156	5.6	York, Pa.	14	1.9	Gasconade, Mo.	3	1.2	Santa Clara, Cal.	1	.8	Cheshire, N. H.	6	.6
Los Angeles, Cal.	165	4.4	Kennebec, Me.	8	1.9	Middlesex, N. J.	16	1.2	Washington, Wis.	5	.8	Randolph, Ark.	1	.6
Scioto, Ohio	4	4.0	Cumberland, Pa.	16	1.8	Bergen, N. J.	17	1.1	Union, N. J.	12	.8			
Strafford, N. H.	19	3.7	Denver, Colo.	14	1.8	Dodge, Wis.	4	1.1	Hampshire, Mass.	3	.8	Total Above Counties	3,711	280.9
Essex, N. J.	79	3.7	Orange, N. Y.	26	1.8	Cumberland, Me.	4	1.1	Callaway, Mo.	2	.8			
Rockingham, N. H.	26	3.2	Herkimer, N. Y.	12	1.8	Cayuga, N. Y.	5	1.1	Jefferson, Wis.	4	.8	% of U.S.A. Total	76.6	79.0
			Hudson, N. J.	34	1.8	Lackawanna, Pa.	5	1.0	Monroe, N. Y.	17	.7			
			Bronx, N. Y.	37	1.7									

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 31

All 12 of these 4-digit industries had good gains, led by industrial leather belting's 43%. Product development and salesmanship by the leather industry appears all the more creditable in view of the constant encroachment upon it by plastic and other materials. Diversification of products and creation of many new items helped raise house slippers 27%, luggage 25%. Even saddlery, harness and whips is up 13% from the 1954 base, due to growth of horseback riding as a sport and the uptrend in racing. This major group includes establishments manufacturing finished leather and artificial leather products, as well as certain similar products made of other materials as an inevitable, though small, part of the overall manufacturing operation.

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	Gross Sales Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
3111	Leather tanning and finishing	579	706	770	35	42.1
3121	Industrial leather belting	136	62	89	4.6	4.7
3131	Footwear cut stock	563	246	280	20.1	21.5
314	*Footwear, except rubber*					
3141	Footwear, except rubber	1,196	1,791	2,023	219.4	213.7
3142	House slippers	173	90	114	10.9	12.9
315	*Leather gloves*					
3151	Leather dress gloves	143	28	33	4.4	5.3
3152	Leather work gloves	96	18	21	2.5	2.9
3161	Luggage	497	169	211	15.9	16.1
317	*Purses and small leather goods*					
3171	Handbags and purses	714	189	206	22.9	23.5
3172	Small leather goods	259	57	68	6.7	6.5
319	*Miscellaneous leather goods*					
3192	Saddlery, harness, and whips	106	10	11	1.3	1.4
3199	Leather goods, n. e. c.	383	40	46	4.6	5.0

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 31

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou) 1957
3111—Leather Tanning and Finishing			Milwaukee, Wis.	21	2.4	Essex, N. J.	39	1.7	Tioga, Pa.	2	1.1	Hillsborough, N. H.	4	.5
Essex, Mass.	138	6.3	New Castle, Del.	7	2.1	Fulton, N. Y.	50	1.4	Sheboygan, Wis.	1	.7	Suffolk, Mass.	20	.4
Philadelphia, Pa.	19	2.7	Cook, Ill.	24	1.9	Broome, N. Y.	4	1.2	Chippewa, Wis.	1	.7	Ashtabula, Ohio	3	.4
			Middlesex, Mass.	9	1.7	Camden, N. J.	6	1.1	Trumbull, Ohio	1	.7			

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SM S I C Manufacture of Leather & Leather Products—(Cont'd)

Estimates for 4-Digit Employment, Leading Counties, S.I.C. 31 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Fond du Lac, Wis.	1	.4
Ottawa, Mich.	1	.4
New York, N. Y.	47	.4
Total Above Counties	398	28.2
Industry Total	579	42.1
% of U. S.	68.7	67.0
3121—Industrial Leather Belting		
Wayne, Mich.	4	.7
Van Wert, Ohio	1	.6
San Mateo, Cal.	1	.6
Kane, Ill.	1	.4
Philadelphia, Pa.	8	.3
New York, N. Y.	13	.3
Cook, Ill.	4	.2
Merrimack, N. H.	1	.2
Worcester, Mass.	5	.2
Total Above Counties	38	3.5
Industry Total	136	4.7
% of U. S.	27.9	76.1
3131—Footwear Cutstock		
Essex, Mass.	130	4.3
St. Louis City, Mo.	22	2.4
Plymouth, Mass.	63	2.0
Suffolk, Mass.	51	1.3
Broome, N. Y.	16	1.3
Middlesex, Mass.	24	1.0
Kings, N. Y.	25	.8
Androscoggin, Me.	18	.6
Hillsborough, N. H.	17	.6
Worcester, Mass.	8	.4
Oxford, Me.	1	.4
York, Pa.	5	.4
Strafford, N. H.	9	.4
Lycoming, Pa.	1	.4
Davidson, Tenn.	4	.3
New York, N. Y.	32	.3
Milwaukee, Wis.	5	.2
White, Ark.	1	.2
Los Angeles, Cal.	12	.2
York, Me.	4	.2
Total Above Counties	448	17.7
Industry Total	563	21.5
% of U. S.	79.6	82.3
3141—Footwear, Except Rubber		
Essex, Mass.	95	13.1
Broome, N. Y.	21	9.3
Plymouth, Mass.	34	8.3
Middlesex, Mass.	39	8.0
Hillsborough, N.H.	22	7.8
Androscoggin, Me.	21	6.3
St. Louis City, Mo.	25	5.9
Worcester, Mass.	16	4.7
Cook, Ill.	16	4.0
Stafford, N. H.	8	3.7
Scioto, Ohio	3	3.6
Suffolk, Mass.	26	3.5
New York, N. Y.	79	3.3
Lancaster, Pa.	19	3.2
Milwaukee, Wis.	14	3.1
Franklin, Mo.	9	3.0
Kings, N. Y.	51	2.9
Rockingham, N. H.	15	2.7
Lynchburg City, Va.	4	2.4
Los Angeles, Cal.	44	2.3
Total Above Counties	561	101.1
Industry Total	1,196	213.7
% of U. S.	46.9	47.5
3142—House Slippers		
Kings, N. Y.	32	1.3
New York, N. Y.	28	1.2
Herkimer, N. Y.	2	1.1
Franklin, N. Y.	3	.9
Middlesex, Mass.	5	.7
Essex, Mass.	13	.7
Worcester, Mass.	7	.6
Bergen, N. J.	2	.5
Haywood, N. C.	1	.5
Washington, Md.	1	.5
Orange, N. Y.	1	.5
Cook, Ill.	8	.4
Hillsborough, N. H.	1	.2
Suffolk, Mass.	6	.2
Fairfield, Conn.	3	.2
Susquehanna, Pa.	1	.2
Franklin, Ohio	1	.2
Manistee, Mich.	1	.2
Hudson, N. J.	2	.2
Franklin, Mo.	1	.2
Total Above Counties	119	10.5
Industry Total	173	12.9
% of U. S.	68.8	81.4
3151—Leather Dress Gloves		
Fulton, N. Y.	89	3.5
Marinette, Wis.	1	.2
Washington, Tenn.	1	.2
Sheboygan, Wis.	2	.2
Gogebic, Mich.	1	.2
New York, N. Y.	14	.2
Los Angeles, Cal.	3	.1
Rutland, Vt.	2	.1
Milwaukee, Wis.	4	.1
Total Above Counties	117	4.9
Industry Total	143	5.3
% of U. S.	81.8	91.8
3152—Leather Work Gloves		
Cook, Ill.	8	.2
Grafton, N. H.	1	.2
La Porte, Ind.	1	.2
Cass, Ill.	1	.2
Montcalm, Mich.	1	.2
Franklin, Tex.	1	.1
Milwaukee, Wis.	6	.1
Brown, Wis.	2	.1
Total Above Counties	21	1.3
Industry Total	96	2.5
3161—Luggage		
New York, N. Y.	152	2.7
Cook, Ill.	64	1.7
Denver, Col.	5	1.6
Kings, N. Y.	32	.8
Jackson, Mo.	6	.8
Bronx, N. Y.	9	.7
Essex, N. J.	19	.6
Middlesex, N. J.	2	.4
Philadelphia, Pa.	31	.4
Mercer, N. J.	3	.4
Bristol, Mass.	3	.4
Los Angeles, Cal.	25	.4
PetersburgCity, Va.	1	.4
Hudson, N. J.	5	.3
King, Wash.	5	.3
Middlesex, Mass.	6	.3
Racine, Wis.	5	.3
Kent, R. I.	1	.2
Polk, Iowa	1	.2
Marin, Cal.	1	.2
Total Above Counties	378	13.1
Industry Total	497	16.1
% of U. S.	75.7	81.4
3171—Handbags and Purses		
New York, N. Y.	386	9.3
Kings, N. Y.	71	1.9
Orange, N. Y.	23	1.3
St. Louis City, Mo.	13	.9
Middlesex, N. J.	14	.8
Los Angeles, Cal.	27	.7
Bristol, Mass.	4	.6
Morris, N. J.	4	.6
Philadelphia, Pa.	6	.6
Hudson, N. J.	14	.6
Union, N. J.	4	.5
Fairfield, Conn.	7	.5
Norfolk, Mass.	1	.4
Bergen, N. J.	2	.4
Columbia, N. Y.	1	.4
Queens, N. Y.	4	.4
Onondaga, N. Y.	2	.2
Montgomery, Pa.	4	.2
Door, Wis.	1	.2
Suffolk, Mass.	15	.2
Total Above Counties	603	20.7
Industry Total	714	23.5
% of U. S.	84.5	88.1
3172—Small Leather Goods		
New York, N.Y.	108	1.6
Essex, N. J.	7	.6
Washington, Wis.	3	.4
Hampden, Mass.	2	.4
Bronx, N. Y.	3	.4
St. Louis City, Mo.	2	.4
Kings, N. Y.	18	.3
Cook, Ill.	13	.2
Hudson, N. J.	2	.2
Berks, Pa.	1	.2
Fulton, N. Y.	2	.2
Passaic, N. J.	2	.2
Ste.Genevieve, Mo.	1	.2
Philadelphia, Pa.	7	.1
Total Above Counties	171	5.4
Industry Total	259	6.5
% of U. S.	66.0	83.1
3192—Saddlery, Harness, and Whips		
Polk, Iowa	1	.2
Gwinnett, Ga.	1	.2
Hamilton, Tenn.	2	.1
Total Above Counties	4	.5
Industry Total	106	1.5
% of U. S.	3.8	33.3
3199—Leather Goods, N. E. C.		
New York, N. Y.	120	1.5
Cook, Ill.	26	.3
Kings, N. Y.	25	.3
Los Angeles, Cal.	25	.3
Suffolk, Mass.	6	.2
Santa Clara, Cal.	1	.2
Philadelphia, Pa.	11	.1
Hamilton, Ohio	3	.1
Bronx, N. Y.	7	.1
Essex, Mass.	8	.1
Nassau, N. Y.	2	.1
Total Above Counties	234	3.3
Industry Total	383	5.0
% of U. S.	61.1	66.0

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SM Manufacturing Employment Map

27″ by 41″; in six colors. Counties with 50 M or more employment shown in Red; 25 to 50 M in Green; 10 to 25 M in Yellow; 5 to 10 M in Blue.

Price: $3.50 each; two or more, $3.00 each.

Map Department

SALES MANAGEMENT 386 Fourth Avenue, New York 16, N. Y.

Manufacture of Stone, Clay & Glass Products—S.I.C. 32

SM Estimates for 100 Counties with 59.4% of 1957 Employment

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Los Angeles, Cal.	529	18.7	Tuscarawas, Ohio	38	4.0	Delaware, Ind.	10	2.6	Rutland, Vt.	25	1.8	King, Wash.	59	1.4
Cook, Ill.	320	13.4	Wood, Ohio	14	3.9	Audrain, Mo.	7	2.6	Dallas, Tex.	20	1.8	Genesee, N. Y.	4	1.4
Allegheny, Pa.	115	8.7	Columbiana, Ohio	40	3.7	New York, N. Y.	198	2.6	Seneca, Ohio	13	1.8	McKean, Pa.	9	1.4
Wayne, Mich.	142	8.1	Franklin, Ohio	47	3.7	Wyandotte, Kan.	14	2.5	Marion, W. Va.	8	1.8	Richmond, Ga.	7	1.4
La Salle, Ill.	23	7.9	Stark, Ohio	35	3.7	Jefferson, Mo.	5	2.5	Monroe, Ind.	28	1.8	Webster, Iowa	10	1.4
Steuben, N. Y.	7	7.8	Erie, N. Y.	73	3.6	Harris, Tex.	68	2.4	Santa Clara, Cal.	24	1.7	Calhoun, Mich.	9	1.4
Cumberland, N. J.	46	7.3	Licking, Ohio	11	3.6	Cuyahoga, Ohio	96	2.3	Clearfield, Pa.	18	1.7	Ottawa, Ohio	11	1.4
Washington, Pa.	26	6.4	Kings, N. Y.	162	3.6	Jefferson, Pa.	8	2.2	Lancaster, Pa.	26	1.7	Centre, Pa.	11	1.3
Worcester, Mass.	30	5.7	Philadelphia, Pa.	93	3.5	Onondaga, N. Y.	19	2.2	San Bernardino, Cal.	46	1.7	Huntingdon, Pa.	8	1.3
Mercer, N. J.	47	5.6	Albany, N. Y.	17	3.5	Mahoning, Ohio	33	2.1	Knox, Tenn.	26	1.7	Guernsey, Ohio	6	1.3
Baltimore, Md.	16	5.5	Somerset, N. J.	16	3.4	Beaver, Pa.	31	2.1	Lawrence, Ind.	10	1.7	Alpena, Mich.	6	1.3
St. Louis, Mo.	33	5.5	Middlesex, N. J.	41	3.4	Providence, R. I.	35	2.1	Summit, Ohio	30	1.6	Calhoun, Mich.	9	1.4
Niagara, N. Y.	13	5.4	Alameda, Cal.	36	3.3	Cabell, W. Va.	18	2.0	Marion, Ind.	29	1.5	Knox, Ohio	2	1.2
Westmoreland, Pa.	41	5.2	Kanawha, W. Va.	15	3.3	Fayette, Pa.	15	2.0	Hamilton, Ohio	51	1.5	Madison, Ind.	10	1.2
Muskingum, Ohio	26	4.9	Lake, Ill.	15	3.3	Middlesex, Mass.	54	2.0	Dade, Fla.	88	1.5	Total Above Counties	4,052	321.4
Fairfield, Ohio	12	4.9	Lake, Ind.	34	3.3	Washington, Vt.	93	2.0	Lehigh, Pa.	33	1.5			
Lucas, Ohio	33	4.9	Lawrence, Pa.	22	3.2	Orleans, La.	25	2.0	Riverside, Cal.	29	1.5	% of U.S.A. Total	38.3	59.4
Harrison, W. Va.	12	4.4	Jefferson, Ala.	48	3.2	Wayne, N. Y.	4	2.0	Salem, N. J.	5	1.5			
Montgomery, Pa.	55	4.3	Madison, Ill.	17	3.2	Grant, Ind.	7	2.0	Jefferson, Ky.	33	1.5			
Armstrong, Pa.	19	4.2	Howard, Ind.	5	3.2	Wood, W. Va.	9	1.9	Queens, N. Y.	92	1.5			
Hancock, W. Va.	12	4.1	Hudson, N. J.	36	2.8	Fairfield, Conn.	33	1.9	Perry, Ohio	14	1.4			
Northampton, Pa.	46	4.1	Hamilton, Tenn.	16	2.6	Okmulgee, Okla.	6	1.8						

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 32

This overall industry breaks down to 28 four-digit industries. Range of gains is broad, from 4% for the slow earthenware food utensil industry to 35% for the non-clay refractories, which was stimulated by the industrial boom of the later '50s. As the result of increased building activity and the development of new uses for finer glass, clay and stone, a number of industries in this major group showed strong gains of 29% or better. These include both clay and non-clay refractories, pottery products not elsewhere classified, lime, and abrasive products. Concrete products showed a good gain of 25%, while sewer pipe, hydraulic cement, and vitreous plumbing fixtures each were up 23%. When separate reports are available for mines and quarries operated by manufacturers classified here, these activities are classified in mining industries. When separate reports are not available, the mining activities are classified with the manufacturing operations in this group.

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	Gross Sales Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
3211	Flat glass	32	371	445	24.6	27.4
322	*Pressed and blown glassware*					
3221	Glass containers	85	635	775	49.4	54.8
3229	Pressed and blown glass, n. e. c.	287	412	490	41.9	43.9
3231	Products of purchased glass	859	372	432	21.6	22.5
3241	Cement, hydraulic	162	811	998	39.8	39.7
325	*Structural clay products*					
3251	Brick and hollow tile	610	250	275	32.4	31.2
3253	Floor and wall tile	49	97	117	11.3	12.7
3254	Sewer pipe	66	74	91	9.6	10.9
3255	Clay refractories	177	136	180	14.5	17.2
3259	Structural clay products, n. e. c.	151	36	40	5.0	5.4
326	*Pottery and related products*					
3261	Vitreous plumbing fixtures	37	116	143	9.2	9.3
3262	Vitreous-china food utensils	34	44	49	8.7	7.8
3263	Earthenware, food utensils	47	66	69	13.3	12.8
3264	Porcelain electrical supplies	45	78	93	9.8	10.1
3265	China decorating for the trade	50	4	4	.5	.5
3269	Pottery products, n. e. c.	654	55	71	9.6	10.7
327	*Concrete and plaster products*					
3271	Concrete products	5,090	736	920	60.4	70.7
3272	Gypsum products	90	282	316	11.0	11.6
3274	Lime	145	109	141	8.0	10.4
3275	Mineral wool	85	157	190	10.2	11.6
3281	Cut-stone and stone products	977	182	207	21.6	23.5
329	*Non-metallic mineral products, n. e. c.*					
3291	Abrasive products	312	333	433	22.3	29.3
3292	Asbestos products	110	346	401	22.0	24.7
3293	Gaskets and asbestos insulations	237	153	171	12.8	14.6
3295	Minerals: ground or treated	353	149	182	7.7	9.1
3297	Nonclay refractories	77	131	177	8.6	11.3
3298	Statuary and art goods	220	12	13	1.7	1.9
3299	Non-metallic mineral prod., n. e. c.	121	55	62	4.5	5.4

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For Special Studies of Specific Industrial Markets by Publications Serving Those Markets, See Pages 79, 177-184.

SM SIC Stone, Clay & Glass Products—S.I.C. 32 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 32

3211 Flat Glass

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Allegheny, Pa.	2	4.7
Jefferson, Mo.	1	2.6
Armstrong, Pa.	2	2.5
Harrison, W. Va.	3	2.3
La Salle, Ill.	1	2.2
Wood, Ohio	1	1.9
Wayne, Mich.	1	1.9
Kanawha, W. Va.	1	1.7
Okmulgee, Okla.	3	1.3
Westmoreland, Pa.	2	1.3
Knox, Ohio	1	.8
Sullivan, Tenn.	1	.8
Sebastian, Ark.	1	.8
Caddo, La.	1	.8
St. Louis City, Mo.	1	.5
Knox, Ind.	1	.5
Butler, Pa.	1	.2
Ramsey, Minn.	1	.2
Orange, Cal.	1	.2
Total Above Counties	26	27.2
Industry Total	32	27.4
% of U. S.	81.3	99.3

3221—Glass Containers

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Cumberland, N. J.	5	5.2
Washington, Pa.	4	3.8
Madison, Ill.	1	3.3
La Salle, Ill.	2	3.0
Los Angeles, Cal.	7	3.0
Alameda, Cal.	3	2.5
Delaware, Ind.	1	2.2
Grant, Ind.	3	2.0
Baltimore City, Md.	4	1.9
Kanawha, W. Va.	1	1.7
Salem, N. J.	2	1.7
Muskingum, Ohio	2	1.7
Cabell, W. Va.	3	1.6
Marion, W. Va.	2	1.6
Fayette, Pa.	1	1.3
Randolph, Ind.	1	1.2
Chemung, N. Y.	1	1.2
Jefferson, Pa.	2	1.2
Clarion, Pa.	2	1.0
Hudson, N. J.	1	.8
Total Above Counties	48	41.9
Industry Total	88	54.8
% of U. S.	56.5	76.5

3229—Pressed and Blown Glassware, N. E. C.

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Steuben, N. Y.	3	7.5
Fairfield, Ohio	5	4.6
Westmoreland, Pa.	8	2.4
Franklin, Ohio	2	2.2
Cumberland, N. J.	21	2.0
Harrison, W. Va.	2	1.7
Washington, Pa.	3	1.7
Providence, R. I.	8	1.6
Lucas, Ohio	2	1.6
Wood, W. Va.	4	1.5
Belmont, Ohio	2	1.0
Allegheny, Pa.	6	1.0
Lewis, W. Va.	4	.8
Tioga, Pa.	1	.7
Huntingdon, Pa.	1	.7
Anderson, S. C.	1	.7
Jay, Ind.	1	.7
Calhoun, Mich.	1	.7
Monongalia, W. Va.	5	.7
Cook, Ill.	18	.5
Total Above Counties	96	34.4
Industry Total	287	43.9
% of U. S.	33.4	78.4

3231—Products of Purchased Glass

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Lucas, Ohio	4	1.9
Wood, Ohio	3	1.7
Cook, Ill.	59	1.6
New York, N. Y.	108	1.4
La Salle, Ill.	1	1.1
Los Angeles, Cal.	47	1.1
Wayne, Mich.	12	.8
Kings, N. Y.	67	.8
Allegheny, Pa.	21	.8
Philadelphia, Pa.	25	.7
Erie, N. Y.	8	.4
McKean, Pa.	1	.4
Hartford, Conn.	3	.4
Fayette, Pa.	1	.4
Wilkes, N. C.	1	.4
Hamilton, Ohio	11	.3
Bronx, N. Y.	16	.3
Hudson, N. J.	9	.3
New Haven, Conn.	7	.3
Baltimore City, Md.	10	.2
Total Above Counties	414	15.0
Industry Total	859	22.5
% of U. S.	48.2	66.7

3241—Cement, Hydraulic

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Northampton, Pa.	12	3.5
San Bernardino, Cal.	3	1.3
Alpena, Mich.	1	1.1
La Salle, Ill.	3	1.1
Lehigh, Pa.	4	1.1
Cerro Gordo, Iowa	2	1.1
Jefferson, Ala.	5	1.1
Lake, Ind.	1	1.1
Los Angeles, Cal.	2	.7
Harris, Tex.	3	.7
St. Louis City, Mo.	2	.7
Clark, Ind.	1	.7
Columbia, N. Y.	2	.7
Dallas, Tex.	3	.7
Santa Clara, Cal.	1	.7
Erie, N. Y.	3	.6
Allegheny, Pa.	2	.5
Allen, Kan.	2	.5
Greene, Ohio	2	.5
Lawrence, Pa.	2	.5
Total Above Counties	56	18.9
Industry Total	162	39.7
% of U. S.	34.6	47.6

3251—Brick and Hollow Tile

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Stark, Ohio	8	.9
Clay, Ind.	7	.7
Cook, Ill.	7	.7
Tuscarawas, Ohio	8	.6
Los Angeles, Cal.	10	.6
Hot Spring, Ark.	3	.6
Denver, Col.	3	.5
Bibb, Ga.	2	.5
Richmond, Ga.	2	.5
Bastrop, Tex.	2	.5
Davidson, Tenn.	2	.4
Beaver, Pa.	5	.4
Albany, N. Y.	3	.4
Ulster, N. Y.	6	.4
Jefferson, Ala.	5	.3
Columbia, Ohio	3	.3
Middlesex, N. J.	3	.3
New Haven, Conn.	3	.3
Carroll, Ohio	3	.3
Lee, N. C.	4	.3
Total Above Counties	89	9.4
Industry Total	610	31.2
% of U. S.	14.6	30.4

3253—Clay Floor and Wall Tile

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Los Angeles, Cal.	9	2.9
Muskingum, Ohio	1	1.7
Stark, Ohio	2	1.7
Montgomery, Pa.	1	.8
Monmouth, N. J.	2	.6
Bucks, Pa.	2	.5
Worcester, Mass.	1	.5
Cattaraugus, N. Y.	1	.5
Madison, Ind.	1	.5
Ohio, W. Va.	1	.5
Hamilton, Ohio	1	.4
Contra Costa, Cal.	1	.4
Pulaski, Ark.	1	.3
Mercer, N. J.	2	.2
Riverside, Cal.	1	.2
Cowley, Kan.	1	.2
Dallas, Tex.	2	.2
Lauderdale, Ala.	1	.2
Tarrant, Tex.	2	.2
Wood, W. Va.	1	.2
Total Above Counties	34	12.7
Industry Total	49	12.7
% of U. S.	69.4	100.0

3254—Clay Sewer Pipe

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Tuscarawas, Ohio	11	2.7
Placer, Cal.	1	.5
Los Angeles, Cal.	3	.5
Jefferson, Ohio	4	.5
Guilford, N. C.	1	.5
Clay, Ind.	2	.4
St. Louis City, Mo.	3	.4
Daviess, Ky.	1	.3
Hamilton, Tenn.	1	.2
Jefferson, Ala.	1	.2
Cambria, Pa.	1	.2
Montgomery, Pa.	1	.2
Armstrong, Pa.	1	.2
Jefferson, Pa.	1	.2
Carroll, Ohio	1	.2
Hocking, Ohio	1	.2
Keokuk, Iowa	1	.2
Crawford, Kan.	1	.2
Richland, S. C.	1	.2
Baldwin, Ga.	1	.2
Total Above Counties	38	8.2
Industry Total	66	10.9
% of U. S.	57.6	75.0

3255—Clay Refractories

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Audrain, Mo.	6	2.7
Clearfield, Pa.	11	1.5
St. Louis City, Mo.	4	1.0
Richmond, Ga.	1	.8
Columbia, Ohio	6	.7
Carter, Ky.	5	.6
Beaver, Pa.	4	.6
St. Louis, Mo.	1	.5
Tuscarawas, Ohio	7	.5
Jackson, Ohio	8	.5
Centre, Pa.	3	.4
Stark, Ohio	3	.3
Jefferson, Ala.	3	.3
Middlesex, N. J.	2	.3
Scioto, Ohio	3	.2
Cook, Ill.	2	.2
Washington, Pa.	1	.2
Hancock, W. Va.	2	.2
Boyd, Ky.	1	.2
Smith, Tex.	2	.2
Total Above Counties	75	11.9
Industry Total	177	17.2
% of U. S.	42.4	69.2

3259—Structural Clay Products, N. E. C.

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Hocking, Ohio	1	.5
Perry, Ohio	3	.3
Clay, Ind.	1	.2
Hancock, Ohio	1	.2
Cook, Ill.	1	.2
Hamilton, Tenn.	1	.2
Tuscarawas, Ohio	2	.2
Montgomery, Kan.	2	.2
Breckinridge, Ky.	1	.2
Middlesex, N. J.	2	.2
Lawrence, Ohio	1	.2
Stokes, N. C.	1	.2
Kankakee, Ill.	3	.1
Total Above Counties	20	2.9
Industry Total	151	5.4
% of U. S.	13.2	54.0

3261—Vitreous Plumbing Fixtures

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Mercer, N. J.	6	2.3
Middlesex, N. J.	5	.8
Armstrong, Pa.	1	.8
Howard, Ind.	2	.6
Crawford, Ill.	1	.5
Seneca, Ohio	1	.5
Lawrence, Pa.	1	.5
Sheboygan, Wis.	1	.5
Orleans, La.	1	.3
Los Angeles, Cal.	1	.3
San Bernardino, Cal.	2	.3
Ashland, Ohio	1	.2
Camden, N. J.	1	.2
Cook, Ill.	1	.2
Marion, W. Va.	1	.2
Etowah, Ala.	1	.2
Contra Costa, Cal.	1	.2
Hamilton, Ohio	1	.2
Medina, Tex.	1	.2
Muskingum, Ohio	1	.2
Total Above Counties	31	9.1
Industry Total	37	9.3
% of U. S.	83.8	97.8

3262—Vitreous-China Food Utensils

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Onondaga, N. Y.	3	1.5
Columbia, Ohio	3	1.1
Lawrence, Pa.	1	1.1
Mercer, N. J.	2	.8
Jefferson, Pa.	1	.6
Los Angeles, Cal.	10	.5
Carroll, Ohio	1	.3
Beaver, Pa.	2	.3
Perry, Ohio	1	.3
Harrison, W. Va.	1	.2
Erie, N. Y.	1	.2
Atlantic, N. J.	1	.2

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Manufacture of Stone, Clay & Glass Products—S.I.C. 32 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 32 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Contra Costa, Cal.	1	.2
Cuyahoga, Ohio	1	.2
Total Above Counties	29	7.5
Industry Total	34	7.8
% of U. S.	85.3	96.2
3263—Earthenware Food Utensils		
Hancock, W. Va.	4	3.8
Los Angeles, Cal.	16	1.3
Mahoning, Ohio	3	1.1
Harrison, Ohio	1	1.1
Guernsey, Ohio	1	.6
Columbia, Ohio	2	.6
Logan, Ill.	1	.6
Macomb, Mich.	1	.6
Unicoi, Tenn.	1	.6
Washington, Pa.	2	.5
Jefferson, Ohio	1	.4
Goodhue, Minn.	1	.4
Tyler, W. Va.	1	.4
Mercer, N. J.	1	.2
Vanderburgh, Ind.	1	.2
Coshocton, Ohio	1	.2
York, Pa.	1	.2
Total Above Counties	39	12.8
Industry Total	47	12.8
% of U. S.	83.0	100.0
3264—Porcelain Electrical Supplies		
Hamilton, Tenn.	2	1.5
Wayne, Mich.	1	1.2
Summit, Ohio	2	1.0
Westmoreland, Pa.	2	.8
Genesee, N. Y.	1	.8
Baltimore City, Md.	1	.8
Mercer, N. J.	5	.6
Knox, Tenn.	1	.4
Dane, Wis.	1	.4
McDonough, Ill.	1	.4
Middlesex, N. J.	2	.4
Wood, W. Va.	1	.2
Hunterdon, N. J.	1	.2
Livingston, N. Y.	1	.2
Erie, Ohio	1	.2
Schenectady, N. Y.	2	.2
Hartford, Conn.	1	.2
Ontario, N. Y.	1	.2
Butler, Pa.	1	.2
Columbia, Ohio	3	.2
Total Above Counties	31	10.1
Industry Total	45	10.1
% of U. S.	68.9	100.0
3265—China Decorating for the Trade		
Allegheny, Pa.	1	.2
Total Above Counties	1	.2
Industry Total	50	.5
% of U. S.	2	33.3
3269—Pottery Products, N. E. C.		
Los Angeles, Cal.	206	2.4
Muskingum, Ohio	17	.8
Perry, Ohio	7	.5
Mercer, N. J.	8	.4
Jefferson, Col.	2	.4
Mahoning, Ohio	7	.3
Orange, Cal.	38	.3
Butler, Pa.	1	.2
Columbia, Ohio	13	.2
Warren, Ill.	1	.2
Kane, Ill.	2	.2
Tazewell, Ill.	2	.2
Summit, Ohio	3	.2
McDonough, Ill.	2	.2
Graves, Ky.	2	.2
Cook, Ill.	9	.2
Beaver, Pa.	2	.1
Total Above Counties	322	7.0
Industry Total	654	10.7
% of U. S.	49.2	65.4
3271—Concrete Products		
Los Angeles, Cal.	85	2.4
Dade, Fla.	62	1.2
Wayne, Mich.	49	1.2
Cook, Ill.	61	.9
Lake, Ind.	16	.8
Bergen, N. J.	15	.8
Harris, Tex.	36	.7
Milwaukee, Wis.	35	.7
King, Wash.	31	.5
Franklin, Ohio	25	.5
Maricopa, Ariz.	18	.4
Broward, Fla.	23	.4
Hennepin, Minn.	24	.4
Allegheny, Pa.	35	.4
Queens, N. Y.	21	.4
Montgomery, Ohio	15	.4
Fulton, Ga.	20	.4
Orleans, La.	9	.4
Dallas, Tex.	21	.4
Hillsborough, Fla.	16	.4
Total Above Counties	618	13.7
Industry Total	5,090	70.7
% of U. S.	12.1	19.4
3272—Gypsum Products		
Webster, Iowa	4	1.2
Genesee, N. Y.	2	1.0
Erie, N. Y.	3	.9
Ottawa, Ohio	2	.5
Washington, Va.	1	.4
Richmond, N. Y.	2	.4
Philadelphia, Pa.	2	.4
Imperial, Cal.	1	.4
Clark, Nev.	1	.4
Blaine, Okla.	1	.4
Chatham, Ga.	1	.4
Iosco, Mich.	1	.4
Lake, Ind.	1	.4
Kent, Mich.	3	.4
Los Angeles, Cal.	7	.4
Nolan, Tex.	2	.4
Fisher, Tex.	2	.3
Bronx, N. Y.	2	.2
Rockingham, N. H.	1	.2
Suffolk, Mass.	1	.2
Total Above Counties	40	9.3
Industry Total	90	11.6
% of U. S.	44.4	80.2
3274—Lime		
Sandusky, Ohio	6	1.4
Centre, Pa.		.9
Ste. Genevieve, Mo.	1	.8
Shelby, Ala.	5	.6
Ottawa, Ohio	2	.6
Seneca, Ohio	1	.5
Lebanon, Pa.	2	.5
Cook, Ill.	4	.4
Berkshire, Mass.	5	.4
Chester, Pa.	1	.3
York, Pa.	2	.3
Independence, Ark.	1	.3
Comal, Tex.	1	.2
Greene, Mo.	2	.2
Giles, Va.	3	.2
Monterey, Cal.	1	.2
Travis, Tex.	1	.2
St. Francois, Mo.	1	.2
Clark, Ohio	2	.1
Clark, Nev.	2	.1
Total Above Counties	46	8.4
Industry Total	145	10.4
% of U. S.	31.7	80.8
3275—Mineral Wool		
Licking, Ohio	1	3.6
Wyandotte, Kan.	4	1.7
Madison, Ind.	2	.6
Los Angeles, Cal.	5	.6
Wayne, Ind.	1	.5
Wabash, Ind.	4	.5
Santa Clara, Cal.	1	.5
Shelby, Ind.	2	.5
Morris, N. J.	2	.3
Middlesex, N. J.	1	.2
Maury, Tenn.	1	.2
Jasper, Mo.	1	.2
Defiance, Ohio	1	.2
Mercer, N. J.	1	.2
Ottawa, Ohio	1	.2
Jefferson, Ala.	3	.1
Erie, N. Y.	2	.1
Total Above Counties	33	10.2
Industry Total	85	11.6
% of U. S.	38.8	87.9
3281—Cut-Stone and Stone Products		
Washington, Vt.	92	1.9
Rutland, Vt.	22	1.7
Monroe, Ind.	24	1.6
Lawrence, Ind.	8	1.2
Elbert, Ga.	39	1.0
Knox, Tenn.	8	.8
Middlesex, Mass.	7	.8
Cook, Ill.	30	.8
Stearns, Minn.	16	.6
Northampton, Pa.	16	.6
Pickens, Ga.	5	.5
Montgomery, Pa.	3	.4
Hudson, N. J.	5	.4
Jasper, Md.	2	.4
Surry, N. C.	2	.4
Scioto, Ohio	2	.3
Talladega, Ala.	3	.3
Franklin, Ala.	2	.2
Lowndes, Miss.	1	.2
Buckingham, Va.	3	.2
Total Above Counties	290	14.3
Industry Total	977	23.5
% of U. S.	29.7	60.9
3291—Abrasive Products		
Niagara, N. Y.	8	6.4
Worcester, Mass.	6	5.9
Cook, Ill.	37	1.9
Albany, N. Y.	1	1.4
Philadelphia, Pa.	10	1.1
Kings, N. Y.	12	1.0
Wayne, Mich.	13	.8
Los Angeles, Cal.	19	.5
Seneca, Ohio	1	.5
St. Louis City, Mo.	2	.5
Passaic, N. J.	8	.5
Barron, Wis.	1	.5
Jackson, Mich.	3	.5
Chester, Pa.	1	.5
Hampden, Mass.	10	.5
Shiawasee, Mich.	1	.5
Fairfield, Conn.	3	.4
Plymouth, Mass.	4	.4
Cuyahoga, Ohio	13	.4
Queens, N. Y.	10	.3
Total Above Counties	160	24.5
Industry Total	312	29.3
% of U. S.	51.3	83.6
3292—Asbestos Products		
Somerset, N. J.	4	3.3
Lake, Ill.	3	2.0
Fairfield, Conn.	1	1.3
Lancaster, Pa.	1	1.2
Los Angeles, Cal.	8	1.1
Montgomery, Pa.	5	.9
Orleans, La.	4	.9
Cook, Ill.	5	.8
Mercer, N. J.	1	.8
Kings, N. Y.	2	.8
Jefferson, La.	2	.8
Charleston, S. C.	1	.8
St. Louis City, Mo.	4	.8
Mecklenburg, N. C.	3	.7
Philadelphia, Pa.	1	.4
Wayne, Mich.	1	.4
Henry, Ind.	1	.4
Passaic, N. J.	4	.4
Albany, N. Y.	2	.4
St. Louis, Mo.	3	.4
Total Above Counties	56	18.7
Industry Total	110	24.7
% of U. S.	50.9	75.7
3293—Gaskets and Asbestos Insulations		
Cook, Ill.	37	4.7
Wayne, Mich.	14	1.7
Montgomery, Pa.	6	1.2
Hudson, N. J.	2	.8
Litchfield, Conn.	1	.8
Norfolk, Va.	1	.8
St. Clair, Mich.	1	.8
Los Angeles, Cal.	13	.4
Philadelphia, Pa.	8	.4
Alameda, Cal.	1	.2
La Porte, Ind.	1	.2
Livingston, Mich.	1	.2
McLean, Ill.	1	.2
Middlesex, N. J.	4	.2
Camden, N. J.	3	.2
Worcester, Mass.	1	.2
Franklin, Ind.	1	.2
Suffolk, Mass.	3	.2
Cuyahoga, Ohio	8	.1
Harris, Tex.	5	.1
Total Above Counties	112	12.7
Industry Total	237	14.8
% of U. S.	47.3	87.0

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More Sales Through Better Plant Location—Page 168

SM S I C Stone, Clay & Glass Products—S.I.C. 32 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 32 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
3295—Minerals, Ground or Treated		
Los Angeles, Cal.	17	.7
Jefferson, Ala.	11	.6
Marathon, Wis.	1	.6
Erie, N. Y.	7	.4
Salt Lake, Utah	3	.3
Harris, Tex.	6	.3
Iosco, Mich.	1	.2
New Castle, Del.	2	.2
Hinds, Miss.	1	.2
Pulaski, Ark.	1	.2
Lake, Ind.	7	.2
Somerset, N. J.	2	.2
Allegheny, Pa.	8	.2
Cuyahoga, Ohio	4	.2
Cook, Ill.	12	.2
Will, Ill.	1	.2
Baltimore, Md.	2	.1
Total Above Counties	88	5.0
Industry Total	353	9.1
% of U. S.	24.4	54.9
3297—Non-clay Refractories		
Baltimore City, Md.	2	1.4
Huntingdon, Pa.	3	1.0
Will, Ill.	2	.6
Blair, Pa.	2	.6
Middlesex, N. J.	2	.5
Montgomery, Pa.	3	.5
Lake, Ind.	1	.5
Jefferson, Ky.	1	.5
Philadelphia, Pa.	2	.3
Westmoreland, Pa.	1	.3
Erie, N. Y.	2	.3
Cape May, N. J.	1	.3
Allegheny, Pa.	3	.3
Greenup, Ky.	1	.3
Jefferson, Ala.	1	.3
Nye, Nev.	2	.2
Hudson, N. J.	1	.2
Centre, Pa.	2	.2
Trumbull, Ohio	2	.2
Butler, Pa.	2	.2
Total Above Counties	36	8.7
Industry Total	77	11.3
% of U. S.	46.8	77.0
3298—Statuary and Art Goods		
Cook, Ill.	29	.3
Milwaukee, Wis.	6	.2
Philadelphia, Pa.	12	.2
New York, N. Y.	15	.1
Kings, N. Y.	14	.1
Suffolk, Mass.	8	.1
Total Above Counties	84	1.0
Industry Total	220	1.9
% of U. S.	38.2	52.6
3299—Non-Metallic Mineral Products, N.E.C.		
Schenectady, N. Y.	2	1.2
Rockingham, N. H.	1	.5
Porter, Ind.	1	.5
Newport News, Va.	2	.5
Westmoreland, Pa.	1	.2
Passaic, N. J.	2	.2
Middlesex, Mass.	4	.2
Avery, N. C.	1	.2
Queens, N. Y.	1	.2
Cuyahoga, Ohio	3	.1
Mitchell, N. C.	3	.1
Essex, N. J.	4	.1
Total Above Counties	25	4.0
Industry Total	121	5.4
% of U. S.	20.7	74.1

Manufacture of Primary Metals—S.I.C. 33

SM Estimates for 100 Counties with 85.6% of 1957 Employment

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Allegheny, Pa.	100	87.1
Lake, Ind.	31	65.6
Cook, Ill.	309	61.8
Cuyahoga, Ohio	187	45.6
Wayne, Mich.	201	43.7
Baltimore, Md.	10	37.8
Erie, N. Y.	63	35.6
Beaver, Pa.	30	34.2
Mahoning, Ohio	30	30.8
Trumbull, Ohio	25	23.9
Stark, Ohio	35	23.6
Los Angeles, Cal.	362	23.5
Jefferson, Ala.	45	23.3
Northampton, Pa.	7	21.4
Westmoreland, Pa.	39	20.1
Cambria, Pa.	5	18.6
Milwaukee, Wis.	89	18.1
New Haven, Conn.	68	15.1
Madison, Ill.	18	15.0
Lorain, Ohio	15	13.7
Hancock, W. Va.	2	11.7
Jefferson, Ohio	6	11.4
Washington, Pa.	9	10.4
Worcester, Mass.	49	10.3
Saginaw, Mich.	9	10.0
Bucks, Pa.	13	9.0
Middlesex, N. J.	25	8.5
Philadelphia, Pa.	83	7.9
Mercer, Pa.	16	7.8
Fairfield, Conn.	67	7.7
Burlington, N. J.	9	7.7
Niagara, N. Y.	16	7.7
Montgomery, Pa.	30	7.3
Pueblo, Colo.	4	7.3
Blount, Tenn.	4	7.2
Butler, Ohio	13	6.9
Berks, Pa.	38	6.5
Dauphin, Pa.	8	6.7
Providence, R. I.	63	6.6
Oneida, N. Y.	15	6.4
St. Lawrence, N. Y.	4	6.4
St. Louis, Mo.	9	6.3
Lucas, Ohio	31	6.0
Jackson, Mo.	31	6.0
Chester, Pa.	12	5.9
Harris, Tex.	45	5.8
Essex, N. J.	82	5.7
Onondaga, N. Y.	31	5.6
Utah, Utah	6	5.5

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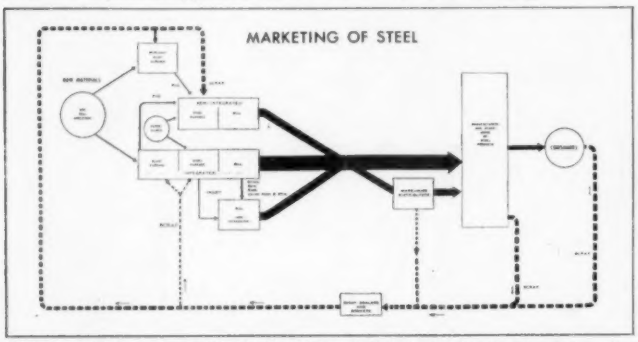

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Manufacture of Primary Metals—S.I.C. 33 (Cont'd)

SM Estimates for 100 Counties with 85.6% of 1957 Employment

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Spokane, Wash.	9	5.4	Butler, Pa.	9	4.0	Scott, Iowa	10	3.5	St. Louis, Minn.	9	3.1	Tuscaloosa, Ala.	1	2.7
Contra Costa, Cal.	5	5.4	Lake, Ill.	9	3.9	Berrien, Mich.	22	3.4	Montgomery, Ohio	32	3.1	Queens, N. Y.	47	2.7
Erie, Pa.	28	5.4	Albany, N. Y.	9	3.9	St. Clair, Ill.	16	3.4	Delaware, Pa.	16	3.1	Chautauqua, N. Y.	5	2.6
Muskegon, Mich.	18	5.0	Lebanon, Pa.	11	3.7	St. Bernard, La.	1	3.4	Peoria, Ill.	8	3.1			
Hudson, N. J.	43	5.0	Hamilton, Tenn.	17	3.7	Etowah, Ala.	9	3.3	Whiteside, Ill.	6	2.9	Total Above Counties	3,329	1061.3
Howard, Ind.	11	5.0	Calhoun, Ala.	12	3.7	Lawrence, Pa.	6	3.3	Carbon, Pa.	6	2.9			
Union, N. J.	40	4.8	Salt Lake, Utah	13	3.7	Cabell, W. Va.	4	3.3	Richland, Ohio	7	2.9	% of U.S.A. Total	57.0	85.6
Henry, Ind.	3	4.5	Colbert, Ala.	3	3.6	Hamilton, Ohio	44	3.3	Allen, Ind.	13	2.8			
Marion, Ind.	29	4.5	Westchester, N. Y.	16	3.6	King, Wash.	41	3.3	Hampden, Mass.	30	2.8			
Alameda, Cal.	61	4.2	Boyd, Ky.	3	3.5	Multnomah, Ore.	43	3.2	Bergen, N. J.	24	2.7			
New Castle, Del.	7	4.2	Kings, N. Y.	86	3.5	Hartford, Conn.	38	3.2	Maricopa, Ariz.	5	2.7			
San Bernardino, Cal.	8	4.1	Franklin, Ohio	23	3.5	Vermilion, Ill.	3	3.1	Passaic, N. J.	24	2.7			

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 33

Practically all of these 19 four-digit industries recorded unusually large gains in product values reflecting both strong demand during the industrial boom and firm price trends throughout most of it. Primary zinc, at a relatively depressed level in 1954, jumped 92% between then and 1958 for the highest percentage gain of the group.

Also showing exceptional advances were steel foundries, up 83%; aluminum rolling and drawing, 64%; wire drawing, 60%; primary copper, 56%, and electro-metallurgical products, 57%. **No significant aggregate figures can be shown either for the 3-digit industries or the 2-digit overall industry.** **See page 83.**

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	Gross Sales Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
331	*Blast furnaces and steel mills*					
3311 / 3312	Blast furnaces and steel mills	289	10,890	16,771	518.7	581.3
3313	Electrometallurgical products	31	272	427	11.4	13.2
332	*Iron and steel foundries*					
3321	Gray-iron foundries	1,414	1,419	1,901	133.9	129.0
3322	Malleable-iron foundries	81	212	290	23.4	23.6
3323	Steel foundries	239	535	979	55.1	73.8
333	*Primary non-ferrous metals*					
3331	Primary copper	27	743	1,159	13.8	17.0
3332	Primary lead	13	248	270	4.1	4.6

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who serves here--on the packa

--- and who makes most of the final decisions?

Around this table, and many like it in corporations across the country, men will gather to "brainstorm" packaging. The agenda may call for a complete facelifting of packaging for an entire family of related products — for greater shelf visibility and a competitive edge. Or, perhaps the problem is to develop a container with greater built-in convenience.

Sooner or later arguments and counter-arguments will merge into a course of action—a final decision, a packaging change. *Who participates in corporate packaging committees . . . who has* the power of final decision?

For the answer, look to packaging's biggest customer, U.S. food manufacturers, who last year invested more than $6 billion in packaging materials alone. The accompanying table is based on reports from more than 300 important food manufacturers, almost half of whom operate with packaging committees when decisions are to be made. It shows the top management personnel who most often serve at the packaging decision-table:*

title	% of companies where member
Vice-President—Sales or General Sales Manager	63%
President	53
Executive Vice-President	42
Advertising Manager	41
Purchasing Agent	40
Production Manager	26
General Manager	22
Plant Superintendent	12
Merchandising Manager	9

Titles in red are those for which "Sales Management" magazine is edited—sales and marketing executives, sales-minded presidents, chairmen and vice-chairmen, partners and owners.

Obviously, sales factors *are today the most important pressures in implementing packaging change. That is why, as these tables show, the* sales-minded *executive usually has the big say-so when decisions are to be made. Because "Sales Management" magazine is edited exclusively for executives at the sales helm—the decision- and policy-makers who market nationally—you will continue to see in "Sales Management" greater emphasis on packaging . . . not the technology of packaging, but the payoff of packaging—the* sell.

***Now, who is *most influential* in making *final* decisions?**

title	
Sales Manager	30%
Packaging Committee	24
President	18
Production Department	11
Purchasing Agent	9
Advertising Manager	9
Miscellaneous	20*

***Adds to more than 100% because of multiple answers, such as "Sales Manager and President."**

****A study for the Folding Paper Box Association of America, conducted by Don White, Inc., market research specialists in the food and grocery product fields. Findings summarized by the public relations firm of Carl Byoir & Associates in these words: "The Sales Manager is the man who makes most of the final packaging decisions . . . The primary reason for a package change is to increase sales."***

Sales Management / THE MAGAZINE OF MARKETING

New York Chicago Santa Barbara

SM S I C Manufacture of Primary Metals—S.I.C. 33 (Cont'd)

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 33 (Continued)

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales: Value Products Shipped ($ million) 1954 Census	Gross Sales: Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
3333	Primary zinc	21	230	442	10.5	16.5
3334	Primary aluminum	16	604	664	20.6	18.0
3339	Primary non-ferrous metals, n. e. c.	27	234	295	5.5	5.2
3341	Secondary non-ferrous metals	360	725	914	15.8	16.9
335	*Non-ferrous rolling and drawing*					
3351	Copper rolling and drawing	89	1,320	1,782	41.9	41.9
3352	Aluminum rolling and drawing	94	874	1,433	36.8	48.3
3359	Rolling and drawing, n. e. c.	98	301	388	10.4	10.2
3361	Non-ferrous foundries	1,920	874	1,241	73.5	74.2
339	*Primary metal industries, n. e. c.*					
3391	Iron and steel forgings	259	595	845	39.8	44.1
3392	Wire drawing	199	1,266	2,026	54.9	68.3
3393	Welded and heavy-riveted pipe	88	526	778	22.1	25.5
3399	Primary metal industries, n. e. c.	574	539	835	25.1	30.6

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 33 (Continued)

3311—Blast Furnaces

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Allegheny, Pa.	7	5.4
Lake, Ind.	3	3.9
Jefferson, Ala.	6	3.0
Cook, Ill.	5	2.9
Mahoning, Ohio	6	2.2
Erie, N. Y.	3	1.8
Beaver, Pa.	2	1.6
Baltimore, Md.	1	1.5
Wayne, Mich.	3	1.4
Cuyahoga, Ohio	3	1.4
Lorain, Ohio	1	1.1
Utah, Utah	2	.8
Cambria, Pa.	1	.7
Northampton, Pa.	1	.7
Jefferson, Ohio	1	.7
Butler, Ohio	2	.5
St. Louis, Minn.	2	.5
Hancock, W. Va.	1	.4
Pueblo, Col.	1	.4
Dauphin, Pa.	1	.4
Total Above Counties	52	31.3
Industry Total	85	36.9
% of U. S.	61.2	84.8

3312—Steel Works and Rolling Mills

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Allegheny, Pa.	19	63.6
Lake, Ind.	5	56.6
Mahoning, Ohio	6	27.2
Beaver, Pa.	6	26.0
Cook, Ill.	8	25.4
Baltimore City, Md.	2	24.4
Erie, N. Y.	5	22.0
Northampton, Pa.	1	20.9
Wayne, Mich.	6	19.6
Jefferson, Ala.	7	18.4
Cambria, Pa.	1	16.1
Trumbull, Ohio	7	14.2
Cuyahoga, Ohio	5	14.2
Westmoreland, Pa.	9	13.3
Stark, Ohio	5	13.1
Hancock, W. Va.	1	12.1
Jefferson, Ohio	3	10.7
Lorain, Ohio	1	10.6
Madison, Ill.	3	9.0
Washington, Pa.	3	8.7
Total Above Counties	103	426.1
Industry Total	204	581.3
% of U. S.	50.5	73.3

3313—Electrometallurgical Products

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Niagara, N. Y.	3	3.6
Fayette, W. Va.	1	2.0
Washington, Ohio	1	1.6
Lee, Iowa	1	.8
Ashtabula, Ohio	1	.8
Mason, W. Va.	1	.5
Muskingum, Ohio	1	.5
Marshall, Ky.	1	.5
Hamilton, Tenn.	1	.5
Colbert, Ala.	1	.5
Jefferson, Ohio	1	.2
Skagit, Wash.	1	.2
Deer Lodge, Mont.	1	.2
Charleston, S. C.	1	.2
Clark, Nev.	1	.2
Douglas, Wash.	1	.2
Washington, Pa.	1	.2
Guernsey, Ohio	1	.2
Knox, Tenn.	1	.2
Cook, Ill.	2	.1
Total Above Counties	23	13.2
Industry Total	31	13.2
% of U. S.	74.2	100.0

3321—Gray-Iron Foundries

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Wayne, Mich.	22	9.8
Cuyahoga, Ohio	25	7.0
Saginaw, Mich.	2	5.9
Jefferson, Ala.	19	4.9
Muskegon, Mich.	9	3.5
Cook, Ill.	47	3.2
Calhoun, Ala.	11	3.1
Milwaukee, Wis.	15	3.0
Los Angeles, Cal.	41	3.0
Hamilton, Tenn.	7	2.3
Tuscaloosa, Ala.	1	2.3
Defiance, Ohio	1	2.2
Burlington, N. J.	4	2.2
St. Louis City, Mo.	17	2.2
Montgomery, Ohio	11	1.9
Westmoreland, Pa.	14	1.8
Allegheny, Pa.	12	1.8
Marion, Ind.	8	1.6
Worcester, Mass.	14	1.6
Etowah, Ala.	6	1.4
Total Above Counties	286	62.3
Industry Total	1,414	129.0
% of U. S.	20.2	48.3

3322—Malleable-Iron Foundries

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Vermilion, Ill.	2	2.8
Saginaw, Mich.	1	2.7
Cuyahoga, Ohio	2	1.4
Cook, Ill.	2	1.1
Milwaukee, Wis.	5	1.1
Franklin, Ohio	2	.9
Macon, Ill.	1	.7
Marion, Ind.	1	.7
Calhoun, Mich.	1	.7
Lawrence, Ohio	1	.7
Erie, N. Y.	3	.6
Rock Island, Ill.	2	.5
New Haven, Conn.	3	.5
Chautauqua, N. Y.	1	.4
Berrien, Mich.	1	.4
Vigo, Ind.	1	.4
Delaware, Ind.	1	.4
Northampton, Pa.	1	.4
Essex, N. J.	2	.4
Waukesha, Wis.	1	.4
Total Above Counties	34	17.2
Industry Total	81	23.6
% of U. S.	42.0	72.9

3323—Steel Foundries

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Allegheny, Pa.	10	5.7
Cook, Ill.	13	4.9
Madison, Ill.	3	3.6
Lake, Ind.	3	3.6
Milwaukee, Wis.	8	2.8
Cambria, Pa.	1	2.8
Delaware, Pa.	7	2.7
Erie, N. Y.	6	2.6
Los Angeles, Cal.	14	2.0
Westmoreland, Pa.	3	1.9
St. Louis City, Mo.	2	1.7
Stark, Ohio	2	1.5
Franklin, Ohio	2	1.5
Berrien, Mich.	2	1.5
Berks, Pa.	3	1.2
Multnomah, Ore.	5	1.2
Cuyahoga, Ohio	6	1.1
Tulsa, Okla.	1	.9
Ohio, W. Va.	1	.9
Racine, Wis.	1	.9
Total Above Counties	93	45.0
Industry Total	239	73.8
% of U. S.	38.9	61.0

3331—Primary Copper

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Middlesex, N. J.	4	5.1
Salt Lake, Utah	2	2.8
Queens, N. Y.	2	1.3
El Paso, Tex.	2	1.3
Pierce, Wash.	2	1.3
Gila, Ariz.	3	.8
Deer Lodge, Mon.	1	.8
Cochise, Ariz.	1	.8
Greenlee, Ariz.	1	.5
Cascade, Mont.	1	.5
Grant, N. M.	2	.5
White Pine, Nev.	1	.5
Pima, Ariz.	1	.2
Pinal, Ariz.	1	.2
Houghton, Mich.	2	.2
Total Above Counties	26	17.0
Industry Total	27	17.0
% of U. S.	96.3	100.0

3332—Primary Lead

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Shoshone, Ida.	1	.8
El Paso, Tex.	1	.7
Contra Costa, Cal.	2	.5
Lewis and Clark, Mont.	1	.4
Jefferson, Mo.	1	.4
Douglas, Neb.	1	.4
Salt Lake, Utah	1	.4
Middlesex, N. J.	1	.2
Lake, Ind.	1	.2
Madison, Ill.	1	.2
Lake, Col.	1	.2
Tooele, Utah	1	.2
Total Above Counties	13	4.6
Industry Total	13	4.6
% of U. S.	100.0	100.0

3333—Primary Zinc

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Cascade, Mont.	1	1.7
Washington, Okla.	1	1.2
Deer Lodge, Mont.	1	1.2
Nueces, Tex.	1	1.2
Okmulgee, Okla.	1	1.2
Beaver, Pa.	1	1.2

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Manufacture of Primary Metals—S.I.C. 33 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 33 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Kay, Okla.	1	1.2
Carbon, Pa.	1	1.2
Washington, Pa.	1	1.2
St. Clair, Ill.	2	1.2
Potter, Tex.	1	.7
La Salle, Ill.	1	.7
Shoshone, Ida.	1	.6
Moore, Tex.	1	.6
Bureau, Ill.	1	.6
Harrison, W. Va.	1	.6
Sebastian, Ark.	1	.2
Total Above Counties	18	16.5
Industry Total	21	16.5
% of U. S.	85.7	100.0

3334—Primary Aluminum

St. Bernard, La.	1	2.7
Blount, Tenn.	1	1.9
St. Lawrence, N. Y.	1	1.8
Spokane, Wash.	1	1.4
Clark, Wash.	1	1.4
Calhoun, Tex.	1	1.3
Hot Spring, Ark.	1	1.1
San Patricio, Tex.	1	1.1
Stanly, N. C.	1	1.0
Milam, Tex.	1	.9
Cowlitz, Wash.	1	.6
Multnomah, Ore.	1	.6
Chelan, Wash.	1	.6
Colbert, Ala.	1	.6
Clark, Ark.	1	.6
Pierce, Wash.	1	.4
Total Above Counties	16	18.0
Industry Total	16	18.0
% of U. S.	100.0	100.0

3339—Primary Nonferrous Metals, N. E. C.

Brazoria, Tex.	1	1.7
Clark, Nev.	1	.7
Galveston, Tex.	1	.7
Baltimore City, Md.	1	.6
New Castle, Del.	1	.6
Erie, N. Y.	2	.2
Adams, Col.	1	.2
Tooele, Utah	1	.2
Total Above Counties	9	4.9
Industry Total	28	5.2
% of U. S.	32.1	94.2

3341—Secondary Nonferrous Metals

Cook, Ill.	33	2.4
Philadelphia, Pa.	15	1.2
Cuyahoga, Ohio	18	1.1
Los Angeles, Cal.	20	1.0
Middlesex, N. J.	4	.9
Richmond, N. Y.	1	.8
Lake, Ind.	6	.8
Essex, N. J.	16	.6
Wayne, Mich.	9	.4
New Castle, Del.	1	.4
Fairfield, Conn.	5	.4
Kings, N. Y.	24	.3
Allegheny, Pa.	5	.3
Kane, Ill.	3	.2
Clinton, Ill.	1	.2
Lake, Ill.	1	.2
San Mateo, Cal.	3	.2
East Baton Rouge, La.	1	.2
Wyandotte, Kan.	1	.2
Erie, N. Y.	4	.2
Total Above Counties	171	12.0
Industry Total	360	16.9
% of U. S.	47.5	71.0

3351—Copper Rolling and Drawing

New Haven, Conn.	15	10.4
Cuyahoga, Ohio	4	2.8
Oneida, N. Y.	3	2.6
Fairfield, Conn.	3	2.6
Wayne, Mich.	6	2.6
Union, N. J.	2	1.8
Madison, Ill.	1	1.5
Baltimore City, Md.	2	1.5
Erie, N. Y.	1	1.4
Cook, Ill.	2	1.4
Litchfield, Conn.	3	1.4
Kenosha, Wis.	1	1.3
Marion, Ind.	2	1.1
Providence, R. I.	3	1.0
Bristol, Mass.	4	.9
Berks, Pa.	3	.7
Allegheny, Pa.	3	.7
St. Clair, Mich.	1	.7
Morgan, Ala.	1	.7
Hartford, Conn.	1	.7
Total Above Counties	61	37.8
Industry Total	89	41.9
% of U. S.	68.5	90.2

3352—Aluminum Rolling and Drawing

Blount, Tenn.	1	5.2
St. Lawrence, N. Y.	1	4.1
Los Angeles, Cal.	10	4.1
Spokane, Wash.	2	3.8
Tippecanoe, Ind.	1	2.9
Cook, Ill.	3	2.8
Colbert, Ala.	1	2.7
Westmoreland, Pa.	1	2.7
Maricopa, Ariz.	1	2.5
Scott, Iowa.	1	2.4
Schuylkill, Pa.	1	2.0
Riverside, Cal.	2	1.5
Licking, Ohio	1	1.5
Kent, Mich.	2	.9
Bergen, N. J.	2	.9
Mahoning, Ohio	8	.8
Baltimore, Md.	1	.5
Marion, W. Va.	1	.5
Franklin, Ohio	1	.5
Luce, Mich.	1	.4
Total Above Counties	42	42.7
Industry Total	94	46.3
% of U. S.	44.7	92.2

3359—Rolling and Drawing, N.E.C.

Cahill, W. Va.	1	2.2
Essex, N. J.	4	1.1
Madison, Ill.	2	.9
Cook, Ill.	7	.7
Hudson, N. J.	2	.7
Bradford, Pa.	1	.7
Wayne, Mich.	7	.5
Midland, Mich.	1	.4
La Salle, Ill.	2	.3
Kings, N. Y.	4	.3
Bristol, Mass.	2	.2
Providence, R. I.	5	.2
Androscoggin, Me.	1	.2
Auglaize, Ohio	1	.2
Beaver, Pa.	1	.2
Putnam, Ind.	1	.2
Middlesex, N. J.	1	.2
Carbon, Pa.	1	.2
Total Above Counties	44	9.4
Industry Total	96	10.2
% of U. S.	44.9	92.2

3361—Nonferrous Foundries

Cook, Ill.	116	6.5
Cuyahoga, Ohio	66	6.0
Los Angeles, Cal.	185	5.2
Howard, Ind.	7	3.0
Lucas, Ohio	9	3.0
Wayne, Mich.	64	2.6
Montgomery, Pa.	6	1.9
Allegheny, Pa.	17	1.7
Lawrence, Ind.	2	1.6
Milwaukee, Wis.	28	1.5
Philadelphia, Pa.	32	1.2
Hamilton, Ohio	18	1.2
Onondaga, N. Y.	11	1.2
St. Louis City, Mo.	14	1.0
Erie, N. Y.	13	.9
Essex, N. J.	22	.8
Kings, N. Y.	37	.8
Bay, Mich.	4	.8
New Haven, Conn.	23	.7
Morris, N. J.	3	.7
Total Above Counties	677	42.3
Industry Total	1,920	74.2
% of U. S.	35.3	57.0

3391—Iron and Steel Forgings

Milwaukee, Wis.	6	5.6
Cook, Ill.	22	5.4
Stark, Ohio	6	3.9
Allegheny, Pa.	8	3.3
Cuyahoga, Ohio	16	3.1
Erie, N. Y.	6	2.3
Wayne, Mich.	16	2.2
Ingham, Mich.	5	1.8
Worcester, Mass.	2	1.7
Lake, Ind.	2	1.0
Hampden, Mass.	3	1.0
Philadelphia, Pa.	3	.9
Sandusky, Ohio	2	.8
Hartford, Conn.	6	.7
Fairfield, Conn.	7	.6
Los Angeles, Cal.	11	.6
Winnebago, Ill.	2	.4
Camden, N. J.	1	.4
Delaware, Ind.	1	.4
Jay, Ind.	1	.4
Total Above Counties	126	36.5
Industry Total	259	44.1
% of U. S.	48.6	82.8

3392—Wire Drawing

Trumbull, Ohio	1	6.3
Providence, R. I.	5	3.5
Westchester, N. Y.	4	3.3
Lake, Ill.	1	3.0
Worcester, Mass.	11	2.9
Allen, Ind.	6	2.5
Oneida, N. Y.	4	2.5
New Haven, Conn.	5	2.5
Mercer, N. J.	4	2.3
Cook, Ill.	16	2.1
Baltimore City, Md.	1	2.0
Cuyahoga, Ohio	5	2.0
Erie, N. Y.	2	1.9
Grant, Ind.	2	1.8
Fairfield, Conn.	7	1.6
Passaic, N. J.	6	1.4
Bristol, R. I.	1	1.3
Hampden, Mass.	4	1.3
Essex, N. J.	8	1.3
Luzerne, Pa.	2	1.0
Total Above Counties	95	46.5
Industry Total	198	68.3
% of U. S.	48.0	68.1

3393—Welded and Heavy-Riveted Pipe

Allegheny, Pa.	4	2.8
Beaver, Pa.	2	2.1
Trumbull, Ohio	3	2.0
Wayne, Mich.	2	1.9
Orange, Tex.	1	1.7
Milwaukee, Wis.	2	1.6
Montgomery, Pa.	4	1.2
Mercer, Pa.	5	1.0
Cuyahoga, Ohio	2	1.0
Lake, Ind.	1	.8
Napa, Cal.	1	.8
Oakland, Mich.	5	.8
Stark, Ohio	1	.8
Cook, Ill.	4	.7
Alameda, Cal.	3	.6
Lorain, Ohio	1	.5
Schuylkill, Pa.	1	.5
Kings, N. Y.	2	.4
Bergen, N. J.	1	.4
Mono, Cal.	1	.4
Total Above Counties	46	22.0
Industry Total	88	25.5
% of U. S.	52.3	86.3

3399—Primary Metal Industries, N. E. C.

Wayne, Mich.	53	2.4
Cuyahoga, Ohio	31	2.3
Cook, Ill.	28	2.3
Los Angeles, Cal.	61	1.8
Beaver, Pa.	6	1.5
New Haven, Conn.	12	1.0
Worcester, Mass.	6	1.0
Allegheny, Pa.	12	1.0
Bergen, N. J.	3	1.0
Oneida, N. Y.	2	1.0
New York, N. Y.	6	1.0
Lake, Ind.	5	.9
Stark, Ohio	1	.9
Mahoning, Ohio	4	.8
Erie, Pa.	6	.8
Passaic, N. J.	5	.6
Hartford, Conn.	6	.6
Philadelphia, Pa.	11	.5
Suffolk, Mass.	3	.4
Queens, N. Y.	12	.4
Total Above Counties	273	22.2
Industry Total	574	30.6
% of U. S.	47.6	72.5

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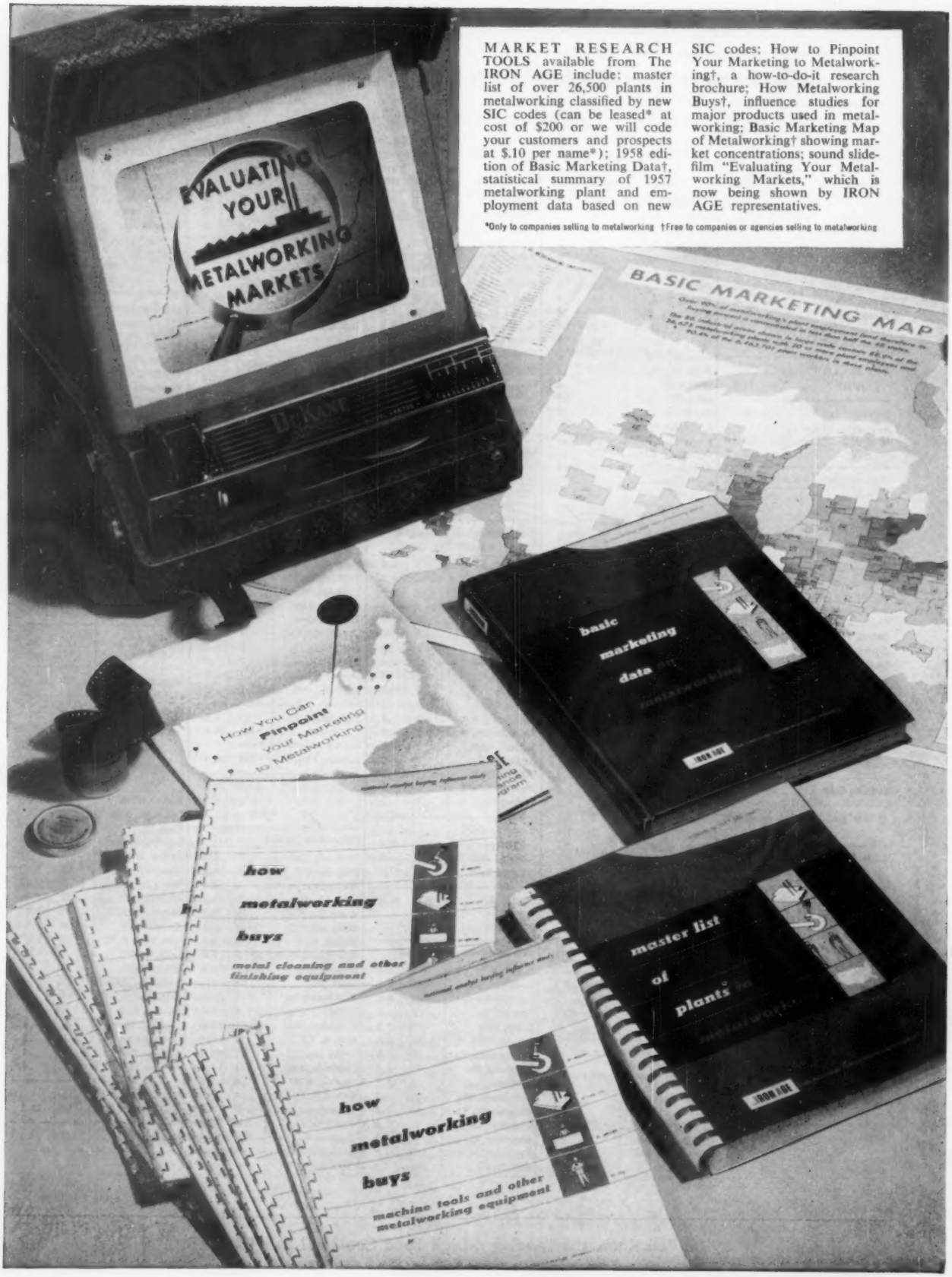
Do You Know the Leading 4-Digit Food Counties? See Page 15.


EVALUATING YOUR METALWORKING MARKETS
BASIC MARKETING MAP
basic marketing data
how metalworking buys
metal cleaning and other finishing equipment
how metalworking buys
machine tools and other metalworking equipment
master list of plants
How You Can Pinpoint Your Marketing to Metalworking

MARKET RESEARCH TOOLS available from The IRON AGE include: master list of over 26,500 plants in metalworking classified by new SIC codes (can be leased* at cost of $200 or we will code your customers and prospects at $.10 per name*); 1958 edition of Basic Marketing Data†, statistical summary of 1957 metalworking plant and employment data based on new SIC codes; How to Pinpoint Your Marketing to Metalworking†, a how-to-do-it research brochure; How Metalworking Buys†, influence studies for major products used in metalworking; Basic Marketing Map of Metalworking† showing market concentrations; sound slidefilm "Evaluating Your Metalworking Markets," which is now being shown by IRON AGE representatives.

*Only to companies selling to metalworking †Free to companies or agencies selling to metalworking

How to Get More for Your Marketing Dollar in Metalworking

New IRON AGE Marketing Assistance Program Helps You Identify and Locate the Most Profitable Markets for Your Products

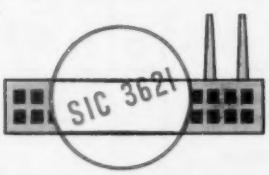
If you sell to metalworking, The IRON AGE Marketing Assistance Program can help streamline your marketing setup to meet today's intensified competition.

This program makes available research tools for carrying out four key steps to improved marketing. First, it provides a master list of metalworking plants, or an IRON AGE SIC coding service for classifying your customers and prospects by the new SIC codes, thus identifying the industries that make up your metalworking markets. Second, it provides statistical data for evaluating the sales potential of these industries for your product. Third, it summarizes metalworking plant and employment data, so you can pinpoint your major sales targets nationally, by states, and by convenient industrial areas within states. Fourth, it provides information that can increase sales efficiency by identifying the buying-influence executives you must *sell* by industry, plant size, title and function.

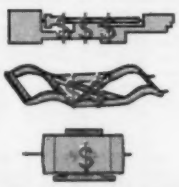
In short, using the tools of The IRON AGE Marketing Assistance Program, you can identify your markets more accurately, make sales planning more effective, and increase sales efficiency. The result is that you get more for your marketing dollar in metalworking.

Your IRON AGE representative has complete details on these research tools . . . and the basis on which they are available. He can also show you a new IA sound slidefilm, "Evaluating Your Metalworking Markets."

How to Get More for Your Marketing Dollar in Metalworking

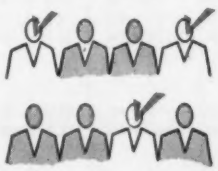


1. Identify the industries that make up your markets



2. Evaluate market potential of each industry

3. Gear sales efforts to market potential



4. Increase sales efficiency by preselling buying-specifying team

The **IRON AGE**

A Chilton Publication

Chestnut & 56th Sts., Philadelphia 39, Pa.

SM S I C Manufacture of Fabricated Metals—S.I.C. 34

SM Estimates for 100 Counties with 80.0% of 1957 Employment

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Cook, Ill.	1,751	90.6	Summit, Ohio	81	9.3	San Francisco, Cal.	158	6.3	Tulsa, Okla.	69	3.9	Chester, Pa.	50	2.6
Los Angeles, Cal.	1,697	54.0	Hudson, N. J.	153	9.1	Genesee, Mich.	31	6.3	Butler, Ohio	24	3.9	Richland, Ohio	25	2.6
Cuyahoga, Ohio	622	38.5	Erie, N. Y.	177	9.0	Lucas, Ohio	106	6.1	Westchester, N. Y.	123	3.9	Bristol, Mass.	95	2.6
Wayne, Mich.	728	38.1	Alameda, Cal.	181	8.9	Trumbull, Ohio	52	6.0	Bergen, N. J.	154	3.9	Delaware, Pa.	46	2.6
Philadelphia, Pa.	573	36.7	Harris, Tex.	161	8.5	Oakland, Mich.	206	5.7	Manitowoc, Wis.	14	3.7	Ramsey, Minn.	68	2.5
Kings, N. Y.	799	25.2	Kent, Mich.	106	8.3	Chautauqua, N. Y.	42	5.7	Monroe, N. Y.	90	3.7	Berks, Pa.	43	2.5
Allegheny, Pa.	231	18.7	Middlesex, Mass.	213	8.3	Mahoning, Ohio	62	5.7	Erie, Pa.	52	3.6	Oklahoma, Okla.	46	2.5
Hartford, Conn.	203	18.1	Montgomery, Pa.	88	8.1	Multnomah, Ore.	127	5.7	Lancaster, Pa.	50	3.4	Essex, Mass.	90	2.5
St. Louis, Mo.	59	17.3	Lake, Ind.	49	7.8	Lorain, Ohio	52	5.6	Onondaga, N. Y.	75	3.4	Henrico, Va.	28	2.4
Milwaukee, Wis.	231	15.0	Mercer, N. J.	50	7.7	Hennepin, Minn.	169	5.6	Hampden, Mass.	81	3.4	Davidson, Tenn.	40	2.4
Baltimore, Md.	29	14.8	Marion, Ind.	142	7.6	Westmoreland, Pa.	30	4.8	York, Pa.	32	3.3	Columbiana, Ohio	16	2.4
New York, N. Y.	889	14.7	Madison, Ind.	19	7.6	Jackson, Mo.	128	4.8	Sheboygan, Wis.	13	3.2	Orleans, La.	70	2.4
Queens, N. Y.	384	14.0	Union, N. J.	148	7.6	Oneida, N. Y.	31	4.2	Sedgwick, Kan.	57	3.2	New Castle, Del.	23	2.3
Hamilton, Ohio	195	12.9	Hamilton, Tenn.	33	7.3	King, Wash.	144	4.2	Ohio, W. Va.	8	3.1	San Mateo, Cal.	60	2.2
Winnebago, Ill.	71	12.5	Beaver, Pa.	20	7.3	Nassau, N. Y.	158	4.2	Kankakee, Ill.	13	3.0	Washington, Wis.	8	2.1
New Haven, Conn.	265	12.0	Providence, R. I.	274	7.2	Dallas, Tex.	134	4.2	Vanderburgh, Ind.	16	3.0	Kane, Ill.	39	2.1
Essex, N. J.	382	11.2	Suffolk, Mass.	203	6.9	Passaic, N. J.	116	4.2	Racine, Wis.	50	3.0			
Jefferson, Ky.	67	11.0	Stark, Ohio	61	6.6	Dade, Fla.	147	4.2	Howard, Ind.	18	2.9	Total Above Counties	16,041	868.2
Franklin, Ohio	93	10.7	Bronx, N. Y.	264	6.6	La Crosse, Wis.	8	4.1	Ottawa, Mich.	33	2.9			
Worcester, Mass.	162	10.1	Macomb, Mich.	166	6.3	Tippecanoe, Ind.	7	4.0	Camden, N. J.	85	2.9			
Fairfield, Conn.	174	9.7	Jefferson, Ala.	80	6.3	Calhoun, Mich.	21	4.0	Lehigh, Pa.	33	2.9	% of U.S.A. Total	71.2	80.0

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 34

One of the larger industries, with 30 four-digit classifications, fabricated metal products shows consistent gains throughout the list. Advances were led by hand saws with a rise of 49%, and metal barrels and metal foil and leaf, each up 40% or better. The smallest rise was 4%, by plumbing fixtures and fittings. Of the remaining industries, all but four had healthy increases of 20% up. Certain important segments of the metal fabricating industries are classified in other major groups—machinery in S.I.Cs. 35 and 36, transportation equipment in 37, professional, scientific and controlling instruments, watches and clocks in 38, and jewelry and silverware in 39. Establishments engaged primarily in producing ferrous and non-ferrous metals and their alloys are classified in S.I.C. 33.

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	Gross Sales Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
3411	Tin cans and other tinware	227	1,367	1,681	55.2	53.2
348	*Cutlery, tools, and hardware*					
3421	Cutlery	182	170	202	15.1	13.9
3422	Edge tools	247	69	86	7.1	7.2
3423	Hand tools, n. e. c.	503	257	319	23.4	24.0
3424	Files	30	27	32	2.9	2.8
3425	Hand saws and saw blades	99	84	125	6.9	8.5
3429	Hardware, n. e. c.	869	1,112	1,346	88.3	87.1
343	*Heating and plumbing equipment*					
3431	Plumbing fixtures and fittings	321	443	461	30.6	25.0
3439	Heating and cooking equip., n. e. c.	899	1,147	1,331	75.3	70.3
344	*Structural metal products*					
3441	Structural and ornamental work	2,917	1,810	2,263	116.3	142.3
3442	Metal doors, sash, and trim	1,106	639	799	43.3	53.1
3443	Boiler shop products	977	1,134	1,315	74.4	83.8
3444	Steel-metal work	2,421	738	937	50.2	62.4
346	*Metal stamping and coating*					
3461	Vitreous-enameled products	51	66	81	7.3	7.8
3463	Metal stampings	2,269	1,728	2,074	128.2	129.2
3465	Enameling and lacquering	380	45	54	5.5	5.7
3466	Galvanizing	133	32	38	3.2	3.5
3467	Engraving on metal	269	27	33	3.6	4.3
3468	Plating and polishing	2,451	304	371	36.1	39.6
3471	Lighting fixtures	1,228	642	803	45.1	50.4
3481	Nails & spikes	77	34	38	2.7	2.5
3489	Wirework, n. e. c.	1,275	745	961	59.9	61.6
349	*Metal products, n. e. c.*					
3491	Metal barrels, drums and pails	93	217	306	10.6	11.7
3492	Safes and vaults	28	40	56	3.4	3.4
3493	Steel springs	101	116	169	7.1	8.7
3494	Bolts, nuts, washers and rivets	457	700	938	53.7	57.6
3495	Screw machine products	1,795	401	517	35.0	35.2
3496	Collapsible tubes	21	37	44	4.3	4.4
3497	Metal foil	66	181	253	6.7	6.8
3499	Fabricated metal prod., n. e. c.	1,026	238	326	18.1	19.4

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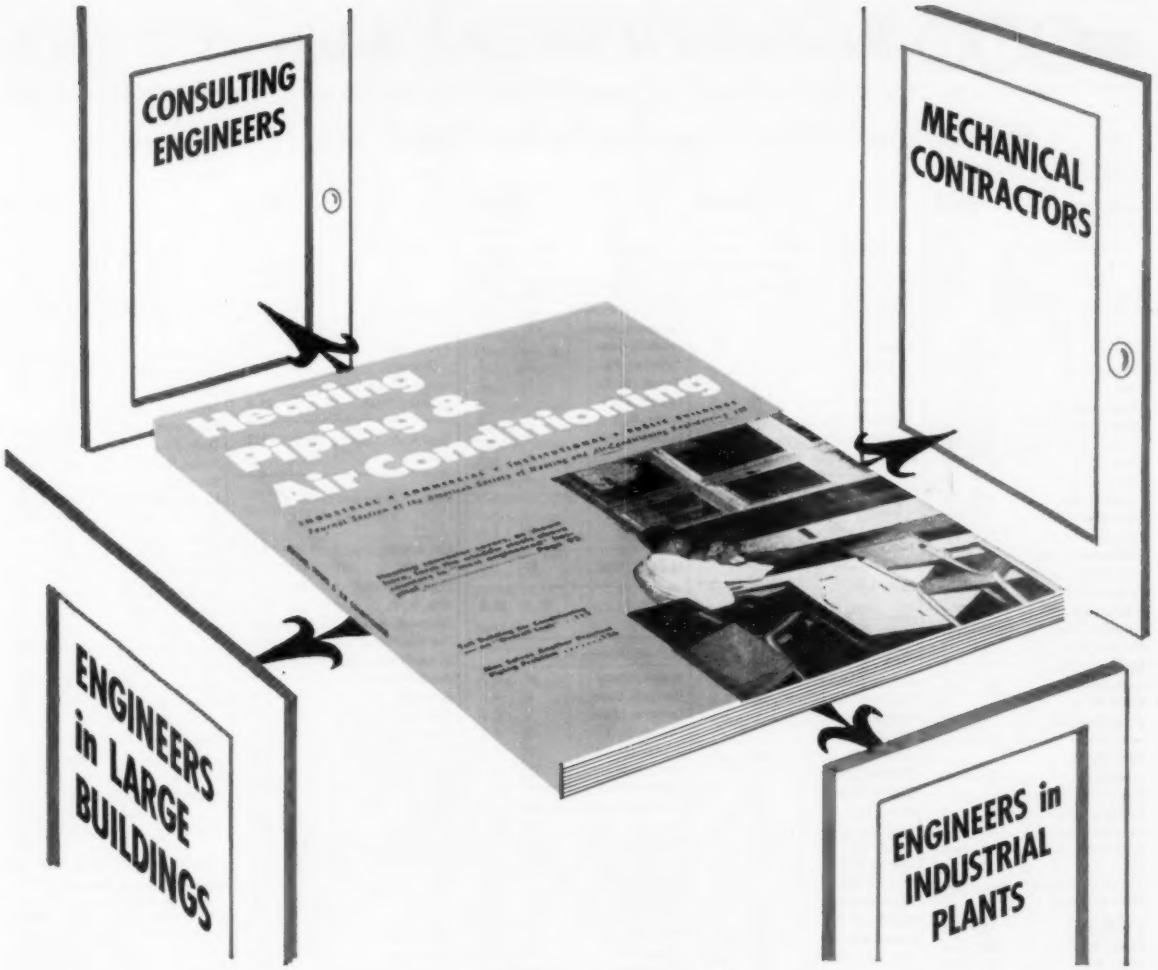

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SM S I C Manufacture of Fabricated Metals—S.I.C. 34 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 34 (Continued)

3411—Tin Cans and Other Tinware

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Cook, Ill.	22	11.7
Baltimore City, Md.	8	4.3
Philadelphia, Pa.	5	2.4
Los Angeles, Cal.	11	2.3
Hudson, N. J.	2	2.2
Kings, N. Y.	19	2.1
Alameda, Cal.	5	1.8
Allegheny, Pa.	2	1.3
Milwaukee, Wis.	2	1.3
St. Louis City, Mo.	2	1.3
San Francisco, Cal.	3	1.3
Harris, Tex.	3	1.3
Passaic, N. J.	4	1.1
Hillsborough, Fla.	2	1.1
Hamilton, Ohio	4	1.1
Monroe, N. Y.	2	.9
Queens, N. Y.	2	.9
Santa Clara, Cal.	2	.7
Union, N. J.	1	.7
Winnebago, Ill.	1	.7
Total Above Counties	102	40.5
Industry Total	227	53.2
% of U. S.	44.9	76.1

3421—Cutlery

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Suffolk, Mass.	1	2.0
Essex, N. J.	30	1.6
Kings, N. Y.	7	1.3
Fairfield, Conn.	8	1.1
Providence, R. I.	6	.9
Ontario, N. Y.	1	.6
Oneida, N. Y.	1	.6
Cattaraugus, N. Y.	7	.6
Hampshire, Mass.	3	.5
Sandusky, Ohio	7	.5
Onondaga, N. Y.	2	.4
Somerset, N. J.	1	.4
Hartford, Conn.	2	.3
Somerset, Md.	1	.3
New Haven, Conn.	5	.2
Erie, N. Y.	2	.2
Orange, N. Y.	1	.2
Wyoming, N. Y.	1	.2
Boulder, Col.	1	.2
Worcester, Mass.	1	.2
Total Above Counties	88	12.2
Industry Total	182	13.9
% of U. S.	48.4	87.8

3422—Edge Tools

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
St. Louis City, Mo.	15	1.1
Kanawha, W. Va.	1	.6
Winnebago, Ill.	3	.3
Worcester, Mass.	7	.3
Hartford, Conn.	4	.4
Essex, Mass.	17	.4
Clinton, Ohio	2	.4
Cook, Ill.	12	.4
Jackson, Nev.	2	.4
New York, N. Y.	21	.3
King, Wash.	2	.2
St. Louis, Mo.	1	.2
Broome, N. Y.	4	.2
Middlesex, Mass.	7	.2
Suffolk, Mass.	3	.1
Middlesex, Conn.	2	.1
Los Angeles, Cal.	15	.1
Total Above Counties	118	5.7
Industry Total	247	7.2
% of U. S.	47.8	79.2

3423—Hand Tools, N.E.C.

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Cook, Ill.	31	2.1
Hartford, Conn.	9	1.5
Franklin, Mass.	5	1.3
Chautauqua, N. Y.	3	1.3
Wood, W. Va.	1	.7
Los Angeles, Cal.	41	.7
Berrien, Mich.	1	.7
Lorain, Ohio	2	.7
Essex, N. J.	13	.6
Cuyahoga, Ohio	12	.5
Philadelphia, Pa.	11	.5
Racine, Wis.	3	.4
Summit, Ohio	7	.4
Fairfield, Conn.	8	.4
Oneida, N. Y.	1	.4
Lehigh, Pa.	1	.4
Worcester, Mass.	8	.4
St. Louis, Minn.	1	.4
Warren, N. J.	1	.4
Hampden, Mass.	3	.4
Total Above Counties	162	14.1
Industry Total	503	24.0
% of U. S.	32.2	58.8

3424—Files

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Providence, R. I.	1	.9
Tuscarawas, Ohio	1	.7
Philadelphia, Pa.	4	.6
Madison, Ind.	1	.4
Total Above Counties	7	2.6
Industry Total	30	2.8
% of U. S.	23.3	92.9

3425—Hand Saws and Saw Blades

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Worcester, Mass.	3	1.5
Philadelphia, Pa.	2	1.5
Marion, Ind.	1	.7
Hartford, Conn.	1	.4
New Haven, Conn.	2	.4
Cook, Ill.	11	.3
Allegheny, Pa.	4	.3
Monroe, N. Y.	1	.2
St. Louis City, Mo.	1	.2
Hampden, Mass.	2	.2
Fairfield, Conn.	1	.2
Jefferson, Ky.	2	.2
Nassau, N. Y.	1	.2
Licking, Ohio	1	.2
Bronx, N. Y.	2	.2
Franklin, Ohio	5	.1
York, Pa.	2	.1
Cuyahoga, Ohio	3	.1
Total Above Counties	45	7.0
Industry Total	99	8.5
% of U. S.	45.5	81.9

3429—Hardware, N.E.C.

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Wayne, Mich.	23	8.7
Hartford, Conn.	6	6.7
Genesee, Mich.	1	5.2
Mercer, N. J.	5	4.8
Winnebago, Ill.	7	4.2
Kent, Mich.	11	4.2
Franklin, Ohio	1	3.8
Los Angeles, Cal.	85	3.3
Cook, Ill.	70	3.2
New Haven, Conn.	14	2.9
Fairfield, Conn.	16	2.7
Cuyahoga, Ohio	14	2.3
Milwaukee, Wis.	8	1.7
San Francisco, Cal.	6	1.5
Whiteside, Ill.	7	1.2
Queens, N. Y.	21	1.2
Philadelphia, Pa.	22	1.1
Kings, N. Y.	33	.9
Bergen, N. J.	2	.9
Lancaster, Pa.	7	.9
Total Above Counties	359	61.2
Industry Total	869	87.1
% of U. S.	41.3	70.3

3431—Plumbing Fixtures and Fittings

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Jefferson, Ky.	2	3.3
Los Angeles, Cal.	36	1.9
New Haven, Conn.	6	1.6
Trumbull, Ohio	2	1.4
Sheboygan, Wis.	1	1.4
Baltimore City, Md.	3	1.1
Hamilton, Ohio	3	1.0
Hamilton, Tenn.	1	.9
Cook, Ill.	26	.8
Contra Costa, Cal.	2	.7
Wayne, Mich.	4	.7
Monongalia, W. Va.	2	.7
Kent, Mich.	3	.7
Cuyahoga, Ohio	25	.7
Columbiana, Ohio	1	.6
Kings, N. Y.	14	.4
Milwaukee Wis.	5	.4
Clinton, Ind.	2	.4
Hartford, Conn.	3	.3
Fayette, Pa.	2	.3
Total Above Counties	143	19.3
Industry Total	321	25.0
% of U. S.	44.5	77.2

3439—Heating and Cooking Equipment, N.E.C.

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Los Angeles, Cal.	89	4.0
Cook, Ill.	41	3.1
Cuyahoga, Ohio	28	2.7
Erie, N. Y.	13	2.3
Sedgwick, Kan.	6	2.0
Franklin, Ohio	9	1.9
St. Louis City, Mo.	12	1.6
Bradley, Tenn.	3	1.6
Kankakee, Ill.	2	1.6
Philadelphia, Pa.	22	1.5
Hudson, N. J.	8	1.4
Hamilton, Ohio	5	1.3
Winnebago, Ill.	2	1.3
Wayne, Mich.	18	1.3
Milwaukee, Wis.	9	1.2
Berks, Pa.	3	1.0
Montgomery, Pa.	5	1.0
Queens, N. Y.	16	1.0
Jefferson, Ky.	5	1.0
Hamilton, Tenn.	7	.9
Total Above Counties	283	33.7
Industry Total	899	70.3
% of U. S.	31.5	47.9

3441—Structural and Ornamental Work

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Allegheny, Pa.	55	6.4
Cook, Ill.	134	5.6
Beaver, Pa.	8	5.2
Los Angeles, Cal.	125	5.0
Jefferson, Ala.	34	3.7
Wayne, Mich.	54	3.2
Lake, Ind.	12	3.0
Harris, Tex.	36	2.9
Montgomery, Pa.	17	2.6
Alameda, Cal.	35	2.5
Kings, N. Y.	87	2.5
Philadelphia, Pa.	67	2.3
Cuyahoga, Ohio	44	1.9
Multnomah, Ore.	24	1.9
Erie, N. Y.	28	1.8
Lehigh, Pa.	11	1.8
Macomb, Mich.	8	1.8
Queens, N. Y.	57	1.8
Oklahoma, Okla.	10	1.5
Stark, Ohio	8	1.5
Total Above Counties	864	58.9
Industry Total	2,917	142.3
% of U. S.	29.6	41.4

3442—Metal Doors, Sash, and Trim

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Wayne, Mich.	45	3.8
Nassau, N. Y.	41	3.8
Cook, Ill.	61	3.1
Mahoning, Ohio	17	2.7
Philadelphia, Pa.	33	2.0
Dade, Fla.	32	1.9
Kings, N. Y.	41	1.7
Bronx, N. Y.	28	1.5
Los Angeles, Cal.	61	1.3
St. Louis, Mo.	6	1.0
Elkhart, Ind.	7	1.0
Berrien, Mich.	3	1.0
Schuylkill, Pa.	1	.8
St. Louis City, Mo.	15	.7
Oakland, Mich.	18	.7
Queens, N. Y.	26	.7
King, Wash.	13	.7
Cuyahoga, Ohio	12	.6
Onondaga, N. Y.	8	.6
Chautauqua, N. Y.	5	.6
Total Above Counties	473	30.2
Industry Total	1,106	53.1
% of U. S.	42.8	56.9

3443—Boiler Shop Products

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Los Angeles, Cal.	56	6.7
Summit, Ohio	5	5.6
Hamilton, Tenn.	5	4.6
Milwaukee, Wis.	15	3.6
Cook, Ill.	39	2.7
Allegheny, Pa.	11	2.5
Lake, Ind.	5	2.3
Tulsa, Okla.	10	2.3
Chautauqua, N. Y.	2	2.0
Harris, Tex.	18	1.8
Chester, Pa.	7	1.7
St. Louis City, Mo.	19	1.7
Jefferson, Ala.	9	1.2
Multnomah, Ore.	7	1.2
Erie, Pa.	5	1.1
Wayne, Mich.	24	1.1
Oklahoma, Okla.	6	1.1
Cumberland, Me.	2	1.0
Montgomery, Pa.	14	1.0
Cuyahoga, Ohio	17	.9
Total Above Counties	278	46.1
Industry Total	977	83.8
% of U. S.	28.5	55.0

3444—Sheet Metal Work

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Los Angeles, Cal.	179	3.2
Cook, Ill.	102	2.8
Philadelphia, Pa.	73	2.8
Kings, N. Y.	62	2.1
Jackson, Mo.	20	1.8
Milwaukee, Wis.	17	1.8
Cuyahoga, Ohio	39	1.6
Hamilton, Ohio	28	1.3
Wayne, Mich.	43	1.2

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Manufacture of Fabricated Metals—S.I.C. 34 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 34 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Essex, N. J.	38	1.0
Allegheny, Pa.	17	1.0
Queens, N. Y.	30	.9
Ashtabula, Ohio	2	.9
Beaver, Pa.	1	.9
Middlesex, Mass.	29	.9
Knox, Ill.	1	.7
Ohio, W. Va.	1	.7
Passaic, N. J.	22	.7
St. Louis City, Mo.	21	.7
New York, N. Y.	41	.6
Total Above Counties	766	27.8
Industry Total	2,421	62.4
% of U. S.	31.6	44.2

3461—Vitreous-Enameled Product

Allegheny, Pa.	2	1.3
Columbiana, Ohio	1	1.1
Cuyahoga, Ohio	2	.5
Kanawha, W. Va.	2	.5
Harrison, Ky.	1	.4
Bradley, Tenn.	1	.4
Orleans, La.	1	.4
Beaver, Pa.	1	.4
Fayette, Ind.	1	.3
Marshall, W. Va.	1	.3
Coshocton, Ohio	1	.3
Erie, Pa.	2	.2
Ottawa, Mich.	1	.2
Middlesex, Mass.	2	.2
Jefferson, Ky.	1	.2
Belmont, Ohio	1	.2
Elkhart, Ind.	1	.2
Allen, Ohio	1	.2
Queens, N. Y.	1	.2
Bristol, Mass.	2	.1
Total Above Counties	28	7.8
Industry Total	51	7.8
% of U. S.	51.0	97.4

3463—Metal Stampings

Cook, Ill.	266	16.0
Wayne, Mich.	114	9.2
Philadelphia, Pa.	42	7.6
Cuyahoga, Ohio	79	4.3
Los Angeles, Cal.	162	3.4
Baltimore City, Md.	9	3.4
Manitowoc, Wis.	6	3.0
Lucas, Ohio	28	2.7
Hamilton, Ohio	27	2.7
Oneida, N. Y.	9	2.5
Oakland, Mich.	43	2.4
New Haven, Conn.	37	2.2
Kings, N. Y.	77	2.0
Jefferson, Ky.	6	2.0
Westmoreland, Pa.	2	1.8
Macomb, Mich.	39	1.7
Washington, Wis.	5	1.6
Milwaukee, Wis.	37	1.6
Queens, N. Y.	48	1.6
Belmont, Ohio	1	1.4
Total Above Counties	1,035	72.9
Industry Total	2,289	129.2
% of U. S.	45.6	56.4

3465—Enameling and Lacquering

Cook, Ill.	49	1.2
Los Angeles, Cal.	40	.5
Wayne, Mich.	18	.4
Kings, N. Y.	18	.3
New York, N. Y.	26	.3
St. Louis City, Mo.	6	.2
Providence, R. I.	29	.2
Cuyahoga, Ohio	14	.2
Tuscarawas, Ohio	1	.2
Essex, N. J.	10	.1
Kent, Mich.	4	.1
Total Above Counties	213	3.7
Industry Total	380	5.7
% of U. S.	56.1	64.9

3466—Galvanizing

Ontario, N. Y.	1	.5
Cook, Ill.	13	.4
Allegheny, Pa.	2	.3
Barron, Wis.	1	.2
Baltimore City, Md.	2	.2
Hudson, N. J.	4	.2
Philadelphia, Pa.	4	.2
Los Angeles, Cal.	9	.2
Middlesex, Mass.	5	.1
Essex, N. J.	3	.1
Kings, N. Y.	4	.1
Total Above Counties	48	2.5
Industry Total	133	3.5
% of U. S.	36.1	71.4

3467—Engraving on Metal

Cook, Ill.	25	.8
Queens, N. Y.	5	.5
Los Angeles, Cal.	26	.5
New York, N. Y.	47	.4
Bergen, N. J.	3	.2
Marion, Ind.	1	.2
Hampden, Mass.	5	.2
Hartford, Conn.	4	.1
Essex, N. J.	11	.1
Total Above Counties	127	3.0
Industry Total	269	4.3
% of U. S.	47.2	69.8

3468—Plating and Polishing

Cook, Ill.	221	4.6
Los Angeles, Cal.	266	3.9
New York, N. Y.	180	2.1
Wayne, Mich.	94	1.7
Shelby, Ohio	3	1.5
Cuyahoga, Ohio	86	1.4
Providence, R. I.	87	1.3
Kings, N. Y.	75	1.3
Essex, N. J.	50	1.2
Lenawee, Mich.	3	.9
Queens, N. Y.	37	.7
Fairfield, Conn.	28	.6
Philadelphia, Pa.	40	.6
Marion, Ind.	22	.5
Milwaukee, Wis.	26	.5
Suffolk, Mass.	20	.4
New Haven, Conn.	23	.4
Hamilton, Ohio	22	.4
Lucas, Ohio	19	.4
Bristol, Mass.	24	.4
Total Above Counties	1,328	24.8
Industry Total	2,451	39.6
% of U. S.	54.2	62.6

3471—Lighting Fixtures

Cook, Ill.	148	6.4
Madison, Ind.	2	5.2
Philadelphia, Pa.	83	3.8
New York, N. Y.	173	3.4
Kings, N. Y.	122	3.3
Hamilton, Ohio	7	2.9
Los Angeles, Cal.	121	2.8
Cuyahoga, Ohio	31	2.1
Hudson, N. J.	19	1.4
Monroe, Mich.	1	1.3
St. Louis City, Mo.	20	1.1
Queens, N. Y.	29	.9
Essex, Mass.	5	.9
Jefferson, Wis.	1	.8
Union, N. J.	8	.7
Wayne, Mich.	14	.6
Suffolk, Mass.	11	.6
Fairfield, Conn.	8	.4
Franklin, Vt.	1	.4
Bronx, N. Y.	28	.4
Total Above Counties	832	39.4
Industry Total	1,228	50.4
% of U. S.	67.8	78.2

3481—Nails and Spikes

Cook, Ill.	10	.5
Cheshire, N. H.	1	.4
Plymouth, Mass.	4	.2
Cuyahoga, Ohio	2	.1
Total Above Counties	17	1.2
Industry Total	77	2.5
% of U. S.	22.1	48.0

3489—Wirework, N.E.C.

Cook, Ill.	109	5.9
Wayne, Mich.	39	3.9
Cuyahoga, Ohio	46	3.7
Los Angeles, Cal.	102	3.2
Hartford, Conn.	31	2.6
Kings, N. Y.	54	2.1
York, Pa.	8	2.1
St. Louis City, Mo.	17	1.4
Worcester, Mass.	12	1.3
New York, N. Y.	55	1.0
Essex, N. J.	17	1.0
Bronx, N. Y.	19	.9
Delaware, Pa.	2	.9
Mercer, N. J.	3	.9
Baltimore City, Md.	12	.9
Kent, Mich.	6	.8
Fairfield, Conn.	16	.7
Allegheny, Pa.	17	.7
Calhoun, Mich.	1	.7
Lenawee, Mich.	3	.7
Total Above Counties	569	35.4
Industry Total	1,275	61.6
% of U. S.	44.6	57.5

3491—Metal Barrels, Drums and Pails

Trumbull, Ohio	3	1.5
Cook, Ill.	8	1.5
Los Angeles, Cal.	2	1.2
Baltimore, Md.	1	1.1
Contra Costa, Cal.	2	.6
Hudson, N. J.	2	.5
Harris, Tex.	2	.4
Middlesex, Mass.	2	.4
Union, N. J.	3	.4
Jefferson, La.	4	.4
Jefferson, Tex.	3	.4
Lucas, Ohio	2	.4
Coshocton, Ohio	1	.4
Jefferson, Ala.	3	.3
Cuyahoga, Ohio	4	.3
Philadelphia, Pa.	2	.2
Gage, Neb.	1	.2
Venango, Pa.	1	.2
Wyandotte, Kan.	1	.2
Alameda, Cal.	1	.2
Total Above Counties	72	10.8
Industry Total	93	11.7
% of U. S.	77.4	92.3

3492—Safes and Vaults

Stark, Ohio	1	1.5
Butler, Ohio	4	1.4
Kenton, Ky.	1	.2
Tippecanoe, Ind.	2	.1
Total Above Counties	8	3.2
Industry Total	26	3.4
% of U. S.	30.8	94.1

3493—Steel Springs

Wayne, Mich.	9	2.2
Cook, Ill.	10	.8
Westmoreland, Pa.	2	.8
Allegheny, Pa.	6	.6
Albany, N. Y.	1	.5
Lucas, Ohio	2	.5
Lake, Ind.	1	.5
Union, N. J.	2	.5
St. Louis, Mo.	1	.5
Lawrence, Pa.	1	.5
Alameda, Cal.	2	.2
Erie, N. Y.	1	.2
Los Angeles, Cal.	8	.1
Macomb, Mich.	3	.1
Total Above Counties	49	8.0
Industry Total	101	8.7
% of U. S.	48.5	91.9

3494—Bolts, Nuts, Washers and Rivets

Cuyahoga, Ohio	35	7.8
Cook, Ill.	53	6.9
Winnebago, Ill.	9	3.1
Wayne, Mich.	29	2.8
Allegheny, Pa.	5	2.4
Montgomery, Pa.	7	2.2
Middlesex, Mass.	5	2.2
Los Angeles, Cal.	40	1.6
New Haven, Conn.	17	1.4
Hartford, Conn.	7	1.4
Union, N. J.	7	1.3
Macomb, Mich.	6	1.2
Lake, Ind.	4	1.0
Worcester, Mass.	4	1.0
Franklin, Ohio	3	.9
Westchester, N. Y.	5	.9
New York, N. Y.	7	.9
Providence, R. I.	7	.9
Bristol, Mass.	6	.9
Philadelphia, Pa.	10	.9
Total Above Counties	266	41.7
Industry Total	457	57.6
% of U. S.	58.2	72.4

3495—Screw-Machine Products

Cook, Ill.	195	4.2
Cuyahoga, Ohio	88	2.5
Los Angeles, Cal.	139	2.1
Wayne, Mich.	125	1.9
Lorain, Ohio	11	1.5
New Haven, Conn.	70	1.4
Hartford, Conn.	51	1.4
Oakland, Mich.	48	.9
Marion, Ind.	20	.8
Essex, N. J.	39	.7
St. Louis City, Mo.	15	.6
Philadelphia, Pa.	28	.6
Macomb, Mich.	32	.6
Worcester, Mass.	18	.6
Providence, R. I.	33	.6
Kings, N. Y.	40	.5
Hennepin, Minn.	16	.5
Monroe, N. Y.	17	.4
Washtenaw, Mich.	7	.4

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SM S I C Manufacture of Fabricated Metals—S.I.C. 34 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 34 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Queens, N. Y.	16	.4
Total Above Counties	1,009	22.6
Industry Total	1,795	35.2
% of U. S.	56.2	64.2
3496—Collapsable Tubes		
Delaware, Pa.	1	.6
Ohio, W. Va.	1	.6
Essex, N. J.	3	.6
New London, Conn.	1	.4
Union, N. J.	1	.4
Jackson, Ark.	1	.4
Warren, N. J.	1	.4
Queens, N. Y.	1	.2
Bergen, N. J.	1	.2
Cook, Ill.	1	.2
Butte, Cal.	1	.2
Hudson, N. J.	1	.2
Total Above Counties	14	4.4
Industry Total	21	4.4
% of U. S.	66.7	100.0
3497—Metal Foil		
Jefferson, Ky.	5	1.4
Richmond City, Va.	2	1.1
St. Louis City, Mo.	2	.7
Westmoreland, Pa.	1	.7
King, N. Y.	8	.6
Bergen, N. J.	5	.5
Fairfield, Conn.	4	.2
Forsyth, N. C.	2	.2
Blount, Tenn.	1	.2
Jackson, Ark.	1	.2
Hartford, Conn.	3	.2
Philadelphia, Pa.	3	.2
Hudson, N. J.	2	.2
Santa Clara, Cal.	1	.2
Total Above Counties	40	6.6
Industry Total	66	6.8
% of U. S.	60.6	97.1
3499—Fabricated Metal Products, N.E.C.		
Cook, Ill.	80	1.8
Kings, N. Y.	68	1.6
Los Angeles, Cal.	80	1.3
New York, N. Y.	71	.8
Porter, Ind.	2	.7
Philadelphia, Pa.	35	.5
Hennepin, Minn.	10	.4
Morris, N. J.	1	.4
Cuyahoga, Ohio	19	.4
McHenry, Ill.	2	.4
Montcalm, Mich.	1	.4
La Salle, Ill.	1	.4
Wayne, Mich.	26	.3
Bergen, N. J.	11	.3
Marion, Ind.	8	.3
Queens, N. Y.	23	.3
Westchester, N. Y.	8	.2
Luzerne, Pa.	2	.2
Baltimore, Md.	3	.2
Elk, Pa.	1	.2
Total Above Counties	452	11.1
Industry Total	1,026	19.4
% of U. S.	44.1	57.2

Manufacture of Machinery (Except Electrical)—S.I.C. 35

SM Estimate of 100 Counties with 78.3% of 1957 Employment

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Cook, Ill.	1,571	118.9
Wayne, Mich.	1,148	77.3
Los Angeles, Cal.	2,068	56.0
Milwaukee, Wis.	408	53.2
Cuyahoga, Ohio	777	52.8
Montgomery, Ohio	195	44.9
Hartford, Conn.	257	36.3
Jefferson, Ky.	70	30.7
Philadelphia, Pa.	491	29.4
Tazewell, Ill.	14	26.1
Hamilton, Ohio	222	23.9
Worcester, Mass.	209	23.5
Fairfield, Conn.	282	20.4
Harris, Tex.	248	20.0
Rock Island, Ill.	48	19.2
St. Louis, Mo.	79	19.0
Hampden, Mass.	130	18.8
Union, N. J.	218	17.2
Essex, N. J.	328	16.4
Franklin, Ohio	109	16.0
Allegheny, Pa.	193	15.4
Marion, Ind.	239	15.1
Hennepin, Minn.	234	15.1
Erie, N. J.	208	14.9
Hudson, N. J.	141	14.9
Stark, Ohio	79	14.6
Onondaga, N. Y.	99	14.4
Kings, N. Y.	417	14.2
Winnebago, Ill.	141	13.8
Muskegon, Mich.	46	13.6
Dutchess, N. Y.	29	13.0
Providence, R. I.	190	12.8
New Haven, Conn.	208	12.2
Schenectady, N. Y.	12	12.0
Essex, Mass.	140	12.0
Vanderburgh, Ind.	26	12.0
Oakland, Mich.	417	11.4
Broome, N. Y.	39	10.7
Middlesex, Mass.	262	10.0
Lucas, Ohio	131	10.0
Monroe, N. Y.	150	10.0
Wayne, Ind.	29	8.9
Alameda, Cal.	177	8.8
York, Pa.	60	8.8
Macomb, Mich.	344	8.3
Racine, Wis.	86	7.7
Suffolk, Mass.	164	7.7
Delaware, Pa.	46	7.7
Kent, Mich.	91	7.6
Erie, Pa.	89	7.3
Black Hawk,	25	7.2
Dallas, Tex.	162	7.2
New York County, N. Y.	553	7.0
Summit, Ohio	171	7.0
Ramsey, Minn.	73	7.0
Chemung, N. Y.	13	6.6
St. Joseph, Ind.	57	6.6
Rock, Wis.	28	6.5
Lake, Ill.	53	6.4
Berks, Pa.	56	6.4
Kane, Ill.	63	6.2
Tulsa, Okla.	137	6.2
Sangamon, Ill.	14	6.1
Montgomery, Pa.	114	6.1
Lenawee, Mich.	35	6.1
Berrien, Mich.	55	6.0
Baltimore, Md.	15	5.9
Richland, Ohio	21	5.8
Calhoun, Mich.	23	5.4
Windsor, Vt.	13	5.0
Westmoreland, Pa.	34	5.0
Herkimer, N. Y.	10	5.0
Queens, N. Y.	255	5.0
Shelby, Tenn.	44	5.0
Saginaw, Mich.	47	4.9
Linn, Iowa	30	4.7
Westchester, N. Y.	86	4.7
Chautauqua, N. Y.	41	4.7
La Porte, Ind.	25	4.7
Venango, Pa.	16	4.6
Lancaster, Pa.	68	4.5
Mercer, N. J.	52	4.5
Passaic, N. J.	166	4.4
Butler, Ohio	32	4.3
Franklin, Pa.	21	4.3
Litchfield, Conn.	51	4.2
Norfolk, Mass.	74	4.2
Tompkins, N. Y.	11	3.8
Bergen, N. J.	201	3.8
Erie, Ohio	17	3.8
Scott, Iowa	34	3.8
Marion, Ohio	14	3.8
Allen, Ind.	61	3.8
Waukesha, Wis.	69	3.7
Warren, N. J.	10	3.7
Bartholomew, Ind.	14	3.6
Lawrence, Pa.	15	3.5
San Francisco, Cal.	136	3.5
Bristol, Mass.	81	3.5
King, Wash.	127	3.4
Columbiana, Ohio	40	3.3
Total Above Counties	16,919	1321.8
% of U.S.A. Total	66.1	78.3

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 35

With 41 four-digit classifications, this is the third largest industry group, food being first with 43, chemicals second with 42. Gains varied broadly, from a 68% jump in oil field machinery and tools to a 3% decline in steam engines and turbines, signifying in the latter instance the continued gradual demise of steam power as more modern machinery takes over. Exceptionally large gains were numerous throughout the list, 64% in construction and mining machinery, 60% in typewriters, 53% each in paper-industries machinery and power-transmission equipment, 46% in ball and roller bearings, and so on. This group does not include any transportation equipment, which is in S.I.C. 37. Machines powered by built-in or detachable motors ordinarily are included in major S.I.C. 35, with the exception of electrical household appliances, which are in S.I.C. 36. Portable tools, both electric and pneumatic-powered, are included in 35, but hand tools are classified in 34.

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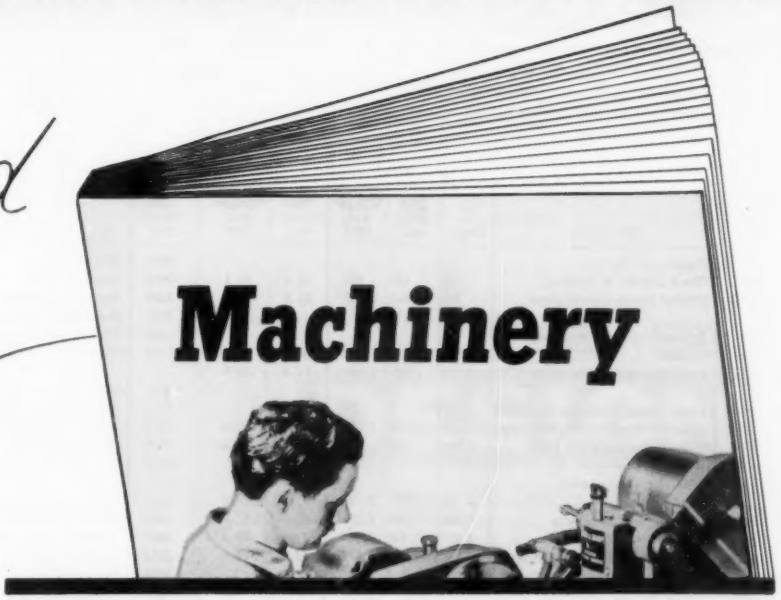
Largest, Liveliest Market in the World

Covered by



No doubt about it, metalworking *is* the world's largest, liveliest market—almost as large as all other industries combined, with over 60,000 plants employing more than 5½ million people. But note this significant fact: of these 60,000 plants, only 7,700 have over 100 employees. *Yet these plants account for 88% of metalworking's total output.*

Where are these 7,700 plants? They're confined to 13 states where 87% of the machine tool (and related) purchases are made—*and it is in these 13 states where 86.75% of* MACHINERY'S *U.S. circulation is concentrated.*

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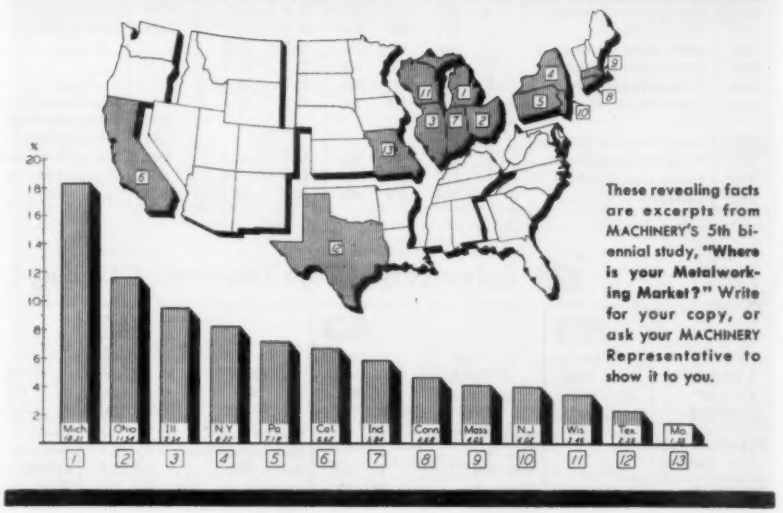

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SM S I C Machinery (Except Electrical)—S.I.C. 35 (Cont'd)

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 35

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	Gross Sales Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
351	*Engines and Turbines*					
3511	Steam Engines & Turbines	22	450	436	30.2	26.1
3519	Internal Combustion Engines	119	891	1,185	51.8	66.0
352	*Tractors and Farm Machinery*					
3521	Tractors	154	1,178	1,590	64.7	70.9
3522	Farm Machinery (exc. tractors)	1,206	1,096	1,184	74.4	66.6
353	*Construction and Mining Machinery*					
3531	Construction and Mining Machinery	626	1,132	1,856	75.7	96.0
3532	Oilfield Machinery and Tools	345	513	862	33.7	43.6
354	*Metalworking Machinery*					
3541	Machine Tools	639	1,147	1,158	81.0	70.8
3542	Metalworking Machinery	501	840	1,058	59.5	67.2
3544	Special Dies and Tools	4,377	932	1,165	77.4	86.1
3545	Metalworking Mach. Attachments	1,022	477	639	44.9	53.5
355	*Special-industry Machinery, n. e. c.*					
3551	Food-products Machinery	672	404	493	33.2	31.0
3552	Textile Machinery	535	337	441	36.6	40.7
3553	Woodworking Machinery	249	167	224	12.0	12.2
3554	Paper-industries Machinery	169	197	301	15.0	17.3
3555	Printing-trades Machinery	358	249	319	22.0	22.2
3559	Special-industry Machinery, n. e. c.	917	581	806	47.0	49.9
356	*General Industrial Machinery*					
3561	Pumps and Compressors	496	891	1,033	60.3	62.5
3562	Elevators and Escalators	131	161	188	10.3	10.9
3563	Conveyors	389	479	599	32.4	36.2
3564	Blowers and Fans	214	262	280	18.1	17.7
3565	Industrial Trucks and Tractors	245	245	353	15.8	21.9
3566	Power-transmission Equipment	471	604	924	49.6	68.2
3567	Industrial Furnaces and Ovens	167	160	221	8.4	10.4
3568	Mechanical Stokers	25	14	14	1.1	1.0
3569	General Industrial Mach., n. e. c.	466	370	463	27.9	32.3
357	*Office and Store Machines*					
3571	Computing and Related Machines	84	614	903	56.7	73.1
3572	Typewriters	18	173	277	18.4	25.1
3576	Scales and Balances	78	64	90	5.4	6.5
3579	Office and Store Machines, n.e.c.	229	276	381	20.8	25.2
358	*Service and Household Machines*					
3581	Domestic Laundry Equipment	56	528	713	22.1	22.3
3582	Laundry and Dry-cleaning Mach.	104	88	112	6.5	6.5
3583	Sewing Machines	82	112	124	12.4	11.1
3584	Vacuum Cleaners	39	158	209	8.4	8.2
3585	Refrigeration Machinery	586	1,367	1,854	128.3	115.4
3586	Measuring and Dispensing Pumps	32	117	151	8.4	8.7
3589	Service and Household Mach., n. e. c.	238	172	206	10.4	9.6
359	*Miscellaneous Mach. Parts*					
3591	Valves and Fittings, exc. plbg.	556	959	1,323	75.0	84.4
3592	Fabricated Pipe and Fittings	250	226	271	12.7	12.3
3593	Ball and Roller Bearings	102	537	784	49.7	63.3
3594	Industrial Patterns and Molds	1,800	194	272	19.9	24.5
3599	Machine Shops	6,832	1,107	1,461	103.7	111.2

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 35

3511—Steam Engines and Turbines

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Delaware, Pa.	2	8.2
Schenectady, N. Y.	1	7.3
Essex, Mass.	1	4.6
Milwaukee, Wis.	2	1.9
Westmoreland, Pa.	1	1.2
York, Pa.	2	.8
Worcester, Mass.	4	.8
Allegheny, N. Y.	1	.6
New London, Conn.	1	.2
Hartford, Conn.	1	.2
Des Moines, Iowa	1	.2
San Francisco, Cal.	1	.2
Erie, Pa.	1	.2
Total Above Counties	19	26.4*
Industry Total	22	26.1
% of U. S.	86.4	100.0

3519—Internal Combustion Engines

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Wayne, Mich.	11	8.6
Milwaukee, Wis.	7	7.0
Muskegon, Mich.	2	6.4
Cook, Ill.	5	5.4
Rock, Wis.	1	5.0
Mercer, Pa.	1	4.6
Lake, Ill.	1	2.6
Cuyahoga, Ohio	1	2.0
Stark, Ohio	1	2.0
Waukesha, Wis.	1	1.7
Bartholomew, Ind.	1	1.5
Hampden, Mass.	1	1.4
Cayuga, N. Y.	1	1.4
Knox, Ohio	1	1.4
Alameda, Cal.	3	1.0
Clark, Ohio	2	.9
Hennepin, Minn.	1	.9
St. Louis City, Mo.	1	.9
Schenectady, N. Y.	1	.9
Fond du Lac, Wis.	2	.9
Total Above Counties	45	56.5
Industry Total	119	66.0
% of U. S.	37.8	85.6

3521—Tractors

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Tazewell, Ill.	2	19.6
Cook, Ill.	3	8.6
Milwaukee, Wis.	5	6.7
Black Hawk, Iowa	1	5.1
Racine, Wis.	3	3.9
Sangamon, Ill.	1	3.6
Wayne, Mich.	7	3.5
Jefferson, Ky.	2	3.2
Rock Island, Ill.	2	2.5
Hennepin, Minn.	3	2.0
Dubuque, Iowa	2	1.4
Floyd, Iowa	1	1.3
Cuyahoga, Ohio	4	.9
York, Pa.	1	.8
Linn, Iowa	1	.8
Stephens, Ga.	1	.8
Kankakee, Ill.	1	.8
Lake, Ill.	1	.7
Ozaukee, Wis.	2	.5
Peoria, Ill.	1	.4
Total Above Counties	44	67.1
Industry Total	154	70.9
% of U. S.	28.6	94.6

3522—Farm Machinery, except Tractors

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Rock Island, Ill.	7	9.3
Cook, Ill.	17	2.5
Shelby, Tenn.	7	2.0
Hennepin, Minn.	20	1.9
La Porte, Ind.	1	1.8
Wayne, Ind.	7	1.7
Polk, Iowa	8	1.7
Winnebago, Ill.	3	1.5
Wapello, Iowa	1	1.4
Fulton, Ill.	1	1.4
Lancaster, Pa.	10	1.4
Scott, Iowa	4	1.3
St. Joseph, Ind.	2	1.1
Dutchess, N. Y.	1	1.1
Mercer, Ohio	5	1.1
Racine, Wis.	8	1.1
Ingham, Mich.	4	1.0
La Crosse, Wis.	2	1.0
Adams, Ill.	5	.8
Genesee, N. Y.	5	.8
Total Above Counties	118	35.9
Industry Total	1,206	66.6
% of U. S.	9.8	53.9

3531—Construction and Mining Machinery

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Milwaukee, Wis.	18	11.4
Cook, Ill.	30	5.8
Franklin, Ohio	3	4.3
Cuyahoga, Ohio	16	3.7
Linn, Iowa	4	3.3
Kane, Ill.	2	3.2
Marion, Ohio	4	3.0
Peoria, Ill.	2	2.3
Allen, Ohio	1	2.2
Erie, Pa.	2	2.0
Los Angeles, Cal.	43	1.8
Bay, Mich.	2	1.8
Marion, Ind.	5	1.8
Crawford, Ohio	12	1.6
Denver, Col.	14	1.6
Hennepin, Minn.	7	1.5
Vanderburgh, Ind.	2	1.5
Sullivan, N. H.	1	1.4
Will, Ill.	2	1.4
Total Above Counties	171	55.6
Industry Total	626	96.0
% of U. S.	27.3	57.9

3532—Oil-Field Machinery and Tools

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Harris, Tex.	72	14.4

*Exceeds total because of rounding

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Manufacture of Machinery (Except Electrical)—S.I.C. 35 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 35 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Los Angeles, Cal.	48	6.9
Tulsa, Okla.	38	3.6
Dallas, Tex.	20	2.5
Stephens, Okla.	2	1.9
Lucas, Ohio	2	1.7
Venango, Pa.	2	1.6
Angelina, Tex.	1	.9
Oklahoma, Okla.	13	.8
Wichita, Tex.	7	.6
Wood, W. Va.	5	.6
Fairfield, Ohio	1	.5
Caddo, La.	2	.5
Jefferson, Tex.	3	.5
Salt Lake, Utah	2	.5
Garfield, Okla.	3	.5
Navarro, Tex.	1	.5
Sedgwick, Kan.	1	.5
Beaver, Pa.	2	.4
Montgomery, Kan.	3	.3
Total Above Counties	226	39.7
Industry Total	345	43.6
% of U. S.	65.5	91.1
3541—Machine Tools		
Hamilton, Ohio	29	7.8
Cuyahoga, Ohio	36	6.5
Winnebago, Ill.	13	5.3
Hartford, Conn.	14	5.3
Wayne, Mich.	58	4.7
Windsor, Vt.	4	4.1
Providence, R. I.	9	3.9
Fairfield, Conn.	14	3.6
Worcester, Mass.	18	3.5
Monroe, N. Y.	8	2.6
Milwaukee, Wis.	12	2.0
Dane, Wis.	2	1.8
Franklin, Pa.	1	1.1
Shelby, Ohio	3	1.1
Cook, Ill.	36	1.1
Fond du Lac, Wis.	1	1.0
Los Angeles, Cal.	45	.8
Middlesex, Mass.	12	.8
Hampden, Mass.	3	.8
Wayne, Ind.	1	.6
Total Above Counties	319	58.4
Industry Total	639	70.8
% of U. S.	49.9	82.5
3542—Metalworking Machinery		
Cook, Ill.	57	10.9
Allegheny, Pa.	8	4.7
Butler, Ohio	5	3.6
Cuyahoga, Ohio	24	3.0
Lawrence, Pa.	3	2.6
Stark, Ohio	1	2.4
Baltimore, Md.	1	2.0
Essex, N. J.	10	2.0
Onondaga, N. Y.	6	1.7
Hamilton, Ohio	6	1.7
Erie, N. Y.	2	1.5
Carroll, Md.	1	1.3
Mahoning, Ohio	5	1.3
Barry, Mich.	1	1.3
Herkimer, N. Y.	1	1.3
Lucas, Ohio	5	1.3
Worcester, Mass.	6	1.0
Kane, Ill.	2	1.0
New Haven, Conn.	9	1.0

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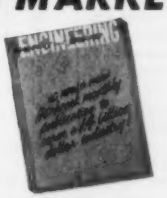

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SM S I C Machinery (Except Electrical)—S.I.C. 35 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 35 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
San Francisco, Cal.	7	.9
Total Above Counties	160	46.3
Industry Total	501	67.2
% of U. S.	31.9	68.9

3544—Special Dies and Tools

Wayne, Mich.	382	18.9
Cook, Ill.	291	4.1
Los Angeles, Cal.	220	4.0
Oakland, Mich.	142	3.7
Cuyahoga, Ohio	185	3.6
Macomb, Mich.	146	3.3
Montgomery, Ohio	81	2.5
Milwaukee, Wis.	97	2.0
Allegheny, Pa.	24	1.5
Essex, N. J.	99	1.4
Philadelphia, Pa.	86	1.4
Marion, Ind.	66	1.4
Fairfield, Conn.	69	1.3
Hartford, Conn.	77	1.3
Union, N. J.	70	1.3
New York, N. Y.	101	.9
Worcester, Mass.	41	.9
St. Joseph, Ind.	19	.9
Monroe, N. Y.	55	.8
Ingham, Mich.	17	.7
Total Above Counties	2,268	55.9
Industry Total	4,377	86.1
% of U. S.	51.8	64.9

3545—Metalworking Machinery Attachments

Wayne, Mich.	124	4.8
Cook, Ill.	72	4.3
Oakland, Mich.	80	4.0
Cuyahoga, Ohio	44	3.6
Macomb, Mich.	41	3.2
Worcester, Mass.	11	3.1
Hartford, Conn.	36	2.6
Saginaw, Mich.	8	2.6
Providence, R. I.	17	2.2
Bristol, Mass.	9	1.9
Franklin, Mass.	7	1.9
Montgomery, Ohio	13	1.7
Franklin, Pa.	3	1.0
Los Angeles, Cal.	68	1.0
Allegheny, Pa.	5	1.0
Westmoreland, Pa.	4	1.0
Hamilton, Ohio	8	.8
Dauphin, Pa.	5	.6
Lake, Ill.	4	.6
Middlesex, Mass.	11	.5
Total Above Counties	570	42.4
Industry Total	1,022	53.5
% of U. S.	55.8	79.3

3551—Food Products Machinery

Cook, Ill.	73	4.6
Wayne, Mich.	4	1.6
Miami, Ohio	2	1.5
Baltimore City, Md.	12	1.5
Los Angeles, Cal.	52	.9
Milwaukee, Wis.	9	.9
York, Pa.	6	.9
Saginaw, Mich.	4	.8
Norfolk, Mass.	5	.8
Jefferson, Wis.	4	.7
Hamilton, Ohio	9	.7
Santa Clara, Cal.	10	.7
Middlesex, Conn.	1	.6
Middlesex, Mass.	9	.5
Hennepin, Minn.	13	.5
Vermilion, Ill.	1	.4
La Porte, Ind.	1	.4
Herkimer, N. Y.	1	.4
San Francisco, Cal.	14	.4
Polk, Fla.	2	.4
Total Above Counties	232	18.2
Industry Total	672	31.0
% of U. S.	34.5	61.9

3552—Textile Machinery

Worcester, Mass.	27	8.7
Berks, Pa.	4	4.6
Philadelphia, Pa.	28	2.8
Providence, R. I.	31	2.4
York, Me.	1	2.4
Belknap, N. H.	3	1.5
Greenville, S. C.	17	1.4
Passaic, N. J.	32	1.0
Montgomery, Pa.	7	.9
Winnebago, Ill.	1	.8
Essex, Mass.	10	.8
Mecklenburg, N. C.	16	.8
Gaston, N. C.	31	.8
Bristol, Mass.	22	.7
Hillsborough, N. H.	5	.6
Middlesex, Mass.	18	.6
Lee, N. C.	2	.6
Essex, N. J.	2	.5
Grafton, N. H.	1	.5
Berkshire, Mass.	1	.5
Total Above Counties	259	32.6
Industry Total	535	40.7
% of U. S.	48.4	80.1

3553—Woodworking Machinery

Los Angeles, Cal.	17	1.9
Fairfield, Conn.	4	.9
Washtenaw, Mich.	1	.7
Rock, Wis.	2	.7
Multnomah, Ore.	12	.5
Will, Ill.	2	.4
Lancaster, Pa.	1	.4
Morris, N. J.	1	.4
King, Wash.	7	.4
Kent, Mich.	8	.3
Hamilton, Tenn.	3	.3
Logan, Ohio	1	.2
Suffolk, Mass.	2	.2
Winnebago, Wis.	4	.2
Alameda, Cal.	2	.2
Lake, Ohio	1	.2
Middlesex, Mass.	4	.2
Lenawee, Mich.	1	.2
Milwaukee, Wis.	2	.2
Guilford, N. C.	5	.2
Total Above Counties	80	8.7
Industry Total	249	12.2
% of U. S.	32.1	71.3

3554—Paper-Industries Machinery

Rock, Wis.	1	2.0
Hillsborough, N. H.	4	1.3
Kings, N. Y.	7	.9
Worcester, Mass.	10	.9
Butler, Ohio	2	.8
New Castle, Del.	1	.8
Philadelphia, Pa.	11	.7
Outagamie, Wis.	5	.7
Norfolk, Mass.	2	.6
Camden, N. J.	1	.5
Washington, N. Y.	2	.5
Clark, Ohio	1	.5
Clinton, N. Y.	1	.5
Essex, Mass.	5	.5
Chester, Pa.	2	.5
Berkshire, Mass.	2	.5
Marathon, Wis.	1	.5
New York, N. Y.	3	.5
Union, N. J.	2	.2
Monroe, N. Y.	4	.2
Total Above Counties	67	13.6
Industry Total	169	17.3
% of U. S.	39.6	78.6

3555—Printing-Trades Machinery

Cook, Ill.	52	5.0
Kings, N. Y.	15	4.0
Union, N. J.	7	1.6
Bronx, N. Y.	3	1.2
Cuyahoga, Ohio	8	.9
Montgomery, Ohio	4	.8
New London, Conn.	1	.7
Philadelphia, Pa.	10	.6
New York, N. Y.	39	.5
Ottawa, Mich.	1	.4
Allegheny, Pa.	2	.4
Rockland, N. Y.	1	.4
Strafford, N. H.	2	.4
Los Angeles, Cal.	21	.3
Queens, N. Y.	10	.3
Passaic, N. J.	4	.3
Stark, Ohio	1	.2
Racine, Wis.	1	.2
Hartford, Conn.	2	.2
Shelby, Ohio	1	.2
Total Above Counties	185	18.2
Industry Total	358	22.2
% of U. S.	51.7	82.0

3559—Special-Industry Machinery, N. E. C.

Cuyahoga, Ohio	33	2.8
Hampden, Mass.	3	2.3
Cook, Ill.	63	2.3
Essex, Mass.	16	2.2
Summit, Ohio	19	2.0
Essex, N. J.	18	1.9
Dallas, Tex.	12	1.8
New Haven, Conn.	5	1.6
Philadelphia, Pa.	19	1.3
Wayne, Mich.	24	1.2
Warren, Pa.	2	.9
Monroe, N. Y.	6	.9
Lycoming, Pa.	4	.9
New Castle, Del.	7	.9
Hamilton, Ohio	10	.8
Middlesex, Mass.	13	.8
Columbia, Ohio	8	.8
Hudson, N. J.	9	.7
St. Joseph, Ind.	2	.7
Alpena, Mich.	2	.7
Total Above Counties	275	27.5
Industry Total	915	49.9
% of U. S.	30.1	55.1

3561—Pumps and Compressors

Los Angeles, Cal.	43	4.1
Wayne, Mich.	12	3.6
Cook, Ill.	32	3.5
Hudson, N. J.	4	3.2
Steuben, N. Y.	1	2.5
Cattaraugus, N. Y.	1	2.1
Mercer, N. J.	1	2.0
Warren, N. J.	1	2.0
Erie, N. Y.	3	1.8
Lucas, Ohio	2	1.6
Milwaukee, Wis.	10	1.6
Venango, Pa.	3	1.4
Adams, Ill.	4	1.3
Montgomery, Ohio	7	1.2
Winnebago, Ill.	3	1.1
Nassau, N. Y.	1	1.1
Fairfield, Conn.	4	.8
Seneca, N. Y.	1	.7
Allegheny, Pa.	5	.7
Ashland, Ohio	1	.7
Total Above Counties	139	37.0
Industry Total	496	62.5
% of U. S.	28.0	59.2

3562—Elevators and Escalators

Hudson, N. J.	2	3.2
Westchester, N. Y.	1	2.4
Lucas, Ohio	2	.4
Shelby, Tenn.	2	.4
Montgomery, Pa.	1	.4
Hamilton, Ohio	3	.3
Cook, Ill.	12	.3
Los Angeles, Cal.	6	.2
San Francisco, Cal.	6	.2
Montgomery, Ohio	3	.2
Wyoming, N. Y.	1	.2
Middlesex, Mass.	2	.2
Philadelphia, Pa.	6	.2
Queens, N. Y.	1	.2
Rock Island, Ill.	1	.2
Milwaukee, Wis.	4	.2
Jefferson, Ky.	3	.1
Kings, N. Y.	2	.1
Polk, Iowa	2	.1
Total Above Counties	60	9.5
Industry Total	131	10.9
% of U. S.	45.8	87.2

3563—Conveyors

Milwaukee, Wis.	6	3.9
Cook, Ill.	24	3.7
Wayne, Mich.	27	3.0
Cuyahoga, Ohio	11	1.7
Muskegon, Mich.	1	1.6
Stark, Ohio	2	1.6
Lake, Ohio	2	.9
Montgomery, Pa.	2	.9
Jefferson, Ala.	2	.8
Schuyler, N. Y.	1	.8
Kane, Ill.	1	.8
Jefferson, Ky.	2	.8
Los Angeles, Cal.	18	.7
Passaic, N. J.	6	.6
Indiana, Pa.	2	.6
Allegheny, Pa.	3	.4
Monmouth, N. J.	1	.4
Lawrence, Pa.	1	.4
Seneca, Ohio	1	.4
Washington, Neb.	1	.4
Total Above Counties	114	24.4
Industry Total	339	36.2
% of U. S.	29.3	67.4

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How to Turn S. I. C. Production Data Into Consumption Data, Page 56

Manufacture of Machinery (Except Electrical)—S.I.C. 35 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 35 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
3564—Blowers and Fans		
Milwaukee, Wis.	5	1.9
Erie, N. Y.	3	1.5
Los Angeles, Cal.	17	1.4
Wayne, Mich.	3	1.2
Cook, Ill.	13	.8
Somerset, N. J.	1	.7
Hamilton, Ohio	4	.7
Jefferson, Ky.	3	.7
Fayette, Ind.	1	.7
Montgomery, Ohio	1	.7
Franklin, Ohio	1	.7
Shelby, Tenn.	3	.7
Cuyahoga, Ohio	8	.6
Kalamazoo, Mich.	2	.5
Union, N. J.	3	.4
Fairfield, Conn.	5	.3
Marion, Ind.	6	.3
St. Louis City, Mo.	5	.3
Miami, Ohio	3	.2
Tuscarawas, Ohio	1	.2
Total Above Counties	88	14.5
Industry Total	214	17.7
% of U. S.	41.1	81.9
3565—Industrial Trucks and Tractors		
Philadelphia, Pa.	4	3.6
Cuyahoga, Ohio	9	2.8
Cook, Ill.	23	1.8
Calhoun, Mich.	1	1.7
Multnomah, Ore.	7	1.2
Berrien, Mich.	2	1.0
Middlesex, Mass.	3	1.0
Hennepin, Minn.	3	.8
Vermilion, Ill.	1	.8
Los Angeles, Cal.	15	.4
Macomb, Mich.	2	.4
Davidson, Tenn.	2	.3
Floyd, Ga.	1	.3
Chenango, N. Y.	1	.3
Lake, Ind.	1	.3
Wayne, Mich.	6	.3
Washington, Pa.	1	.3
Rice, Minn.	1	.3
Oklahoma, Okla.	2	.3
Polk, Ore.	1	.3
Total Above Counties	88	17.8
Industry Total	245	21.9
% of U. S.	35.1	81.3
3566—Power Transmission Equipment		
Marion, Ind.	8	7.3
Cook, Ill.	45	5.4
Cuyahoga, Ohio	21	4.6
Milwaukee, Wis.	15	4.1
Wayne, Mich.	23	4.1
Philadelphia, Pa.	12	3.7
Norfolk, Mass.	2	1.9
Hampden, Mass.	5	1.8
Winnebago, Ill.	7	1.8
Lawrence, Pa.	2	1.4
Hamilton, Ohio	4	1.4
Erie, N. Y.	4	1.2
Hartford, Conn.	8	1.1
Passaic, N. J.	3	1.1
Lucas, Ohio	5	1.1
Los Angeles, Cal.	34	1.1
Middlesex, N. J.	3	1.1
St. Joseph, Ind.	4	1.1
Bartholomew, Ind.	2	1.0
Tompkins, N. Y.	1	1.0
Total Above Counties	208	47.3
Industry Total	471	68.2
% of U. S.	44.2	69.4
3567—Industrial Furnaces and Ovens		
Cook, Ill.	16	1.0
Crawford, Pa.	1	.8
Schenectady, N. Y.	1	.8
Allegheny, Pa.	8	.8
Lucas, Ohio	1	.8
Philadelphia, Pa.	7	.7
Wayne, Mich.	12	.6
Middlesex, N. J.	1	.5
Columbia, Ohio	1	.5
Hennepin, Minn.	2	.5
Cuyahoga, Ohio	9	.4
Kent, Mich.	2	.2
Seneca, Ohio	1	.2
Fairfield, Conn.	2	.2
Duval, Fla.	2	.2
Union, N. J.	2	.2
Winnebago, Ill.	3	.2
Mercer, N. J.	3	.1
Providence, R. I.	5	.1
Los Angeles, Cal.	12	.1
Total Above Counties	91	8.9
Industry Total	167	10.4
% of U. S.	54.5	85.6
3568—Mechanical Stokers		
Wayne, Mich.	2	.4
Monroe, Mich.	1	.4
Total Above Counties	3	.8
Industry Total	25	1.0
% of U. S.	12.0	80.0
3569—General Industrial Machinery, N.E.C.		
Erie, N. Y.	8	3.0
Hudson, N. J.	7	2.5
Los Angeles, Cal.	38	2.2
Schenectady, N. Y.	1	2.2
Cook, Ill.	44	1.6
Philadelphia, Pa.	11	1.5
Middlesex, N. J.	1	.8
Stark, Ohio	2	.8
Fairfield, Ohio	1	.8
Union, N. J.	8	.6
Erie, Pa.	6	.6
Hartford, Conn.	5	.5
Worcester, Mass.	3	.5
Providence, R. I.	4	.5
Waukesha, Wis.	2	.5
Kings, N. Y.	14	.5
Middlesex, Mass.	4	.5
New Haven, Conn.	2	.5
Monroe, Pa.	1	.5
Mahoning, Ohio	2	.5
Total Above Counties	162	21.1
Industry Total	486	32.3
% of U. S.	34.8	65.3
3571—Computing and Related Machines		
Montgomery, Ohio	1	16.3
Wayne, Mich.	5	11.1
Broome, N. Y.	3	10.9
Dutchess, N. Y.	2	7.3
Herkimer, N. Y.	1	4.1
Alameda, Cal.	2	3.9
Cook, Ill.	7	2.3
Fairfield, Conn.	1	2.2
Los Angeles, Cal.	13	2.0
Essex, N. J.	1	2.0
Hartford, Conn.	1	1.9
Philadelphia, Pa.	3	1.0
Tompkins, N. Y.	1	.9
Kent, Mich.	1	.9
Ramsey, Minn.	2	.9
Chautauqua, N. Y.	2	.9
Monroe, N. Y.	1	.9
Jefferson, Wis.	1	.5
Bristol, Va.	1	.5
Monmouth, N. J.	1	.5
Total Above Counties	50	71.0
Industry Total	84	73.1
% of U. S.	59.5	97.1
3572—Typewriters		
Hartford, Conn.	3	11.5
Chemung, N. Y.	1	4.8
Dutchess, N. Y.	1	3.1
Tompkins, N. Y.	1	2.2
Onondaga, N. Y.	1	1.9
McHenry, Ill.	1	.5
Essex, N. J.	1	.5
Litchfield, Conn.	1	.3
Cook, Ill.	2	.1
Total Above Counties	12	24.9
Industry Total	18	25.1
% of U. S.	66.7	99.2
3576—Scales and Balances		
Kings, N. Y.	2	.8
Rutland, Vt.	1	.8
Lucas, Ohio	2	.8
Caledonia, Vt.	1	.8
Cook, Ill.	9	.7
Passaic, N. J.	3	.6
New York, N. Y.	4	.2
Winnebago, Ill.	1	.2
Franklin, Ohio	2	.2
Montgomery, Ohio	1	.2
Rock Island, Ill.	1	.2
Total Above Counties	27	5.5
Industry Total	78	6.5
% of U. S.	34.6	84.6
3579—Office and Store Machines, N.E.C.		
Cook, Ill.	47	7.5
Cuyahoga, Ohio	6	3.1
Fairfield, Conn.	5	2.4
St. Louis City, Mo.	4	1.4
Essex, N. J.	4	1.3
Middlesex, Mass.	2	1.2
Hartford, Conn.	1	.8
New London, Conn.	1	.8
Kane, Ill.	3	.6
Queens, N. Y.	3	.5
Bristol, Mass.	1	.5
Morris, N. J.	2	.5
Broome, N. Y.	1	.5
Camden, N. J.	1	.5
New York, N. Y.	21	.4
Winnebago, Ill.	1	.2
Worcester, Mass.	2	.2
Los Angeles, Cal.	13	.2
New Haven, Conn.	2	.2
Monroe, N. Y.	3	.2
Total Above Counties	123	23.0
Industry Total	229	25.2
% of U. S.	53.7	91.3
3581—Domestic Laundry Equipment		
Berrien, Mich.	1	3.8
Jasper, Iowa	2	3.3
Cook, Ill.	4	3.0
Sandusky, Ohio	2	2.0
Jefferson, Ky.	1	1.8
Cuyahoga, Ohio	3	.9
Tazewell, Ill.	1	.8
Fond du Lac, Wis.	1	.8
Jefferson, Iowa	1	.8
Effingham, Ill.	1	.8
Williamson, Ill.	1	.8
Macomb, Mich.	1	.4
Hamilton, Iowa	1	.4
Erie, Pa.	1	.4
Chautauqua, N. Y.	1	.4
McLean, Ill.	1	.4
Manitowoc, Wis.	1	.4
Fairfield, Conn.	1	.2
McHenry, Ill.	1	.2
St. Louis, Minn.	1	.2
Total Above Counties	27	21.8
Industry Total	56	22.3
% of U. S.	48.2	97.8
3582—Laundry and Dry-Cleaning Machinery		
Onondaga, N. Y.	3	1.1
Hamilton, Ohio	2	.8
Rock Island, Ill.	2	.7
Monroe, N. Y.	1	.7
Wayne, Mich.	4	.5
Cook, Ill.	18	.4
Providence, R. I.	1	.4
Milwaukee, Wis.	1	.2
Jefferson, Ky.	1	.2
Dallas, Tex.	2	.1
Total Above Counties	35	5.1
Industry Total	104	6.5
% of U. S.	33.7	78.5
3583—Sewing Machines		
Union, N. J.	2	5.2
Fairfield, Conn.	1	1.5
New York, N. Y.	30	.8
Cuyahoga, Ohio	1	.6
New Haven, Conn.	1	.6
Cook, Ill.	3	.6
Middlesex, Mass.	2	.4
Anderson, S. C.	1	.4
McHenry, Ill.	1	.2
St. Louis City, Mo.	2	.2
Hartford, Conn.	1	.2
Total Above Counties	45	10.7
Industry Total	82	11.1
% of U. S.	54.9	96.4
3584—Vacuum Cleaners		
Stark, Ohio	2	1.9
Fairfield, Conn.	1	1.4
Cook, Ill.	7	1.3
Cuyahoga, Ohio	6	1.1
Lucas, Ohio	2	.8
McLean, Ill.	1	.7
Erie, Ohio	1	.4
Kings, N. Y.	2	.2
Total Above Counties	22	7.8
Industry Total	39	8.2
% of U. S.	56.4	95.1

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Name-the-Plant Quiz—Page 41

SM SIC Machinery (Except Electrical)—S.I.C. 35 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 35 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
3585—Refrigeration Machinery		
Montgomery, Ohio	2	18.2
Vanderburgh, Ind.	4	7.5
Onondaga, N. Y.	4	6.2
Erie, Pa.	4	4.8
Lenawee, Mich.	5	4.1
Hampden, Mass.	2	4.1
Kent, Mich.	2	3.1
Cook, Ill.	36	3.0
St. Louis City, Mo.	19	2.8
Los Angeles, Cal.	41	2.5
La Crosse, Wis.	3	2.5
Franklin, Ohio	5	2.3
Montcalm, Mich.	2	2.2
Wayne, Ind.	4	2.0
Essex, N. J.	9	1.8
Sedgwick, Kan.	2	1.6
Fayette, Ind.	1	1.6
Wayne, Mich.	10	1.4
Ramsey, Minn.	3	1.3
Hennepin, Minn.	18	1.3
Total Above Counties	172	75.3
Industry Total	586	115.4
% of U. S.	29.4	65.3
3586—Measuring and Dispensing Pumps		
Cook, Ill.	2	1.7
Hampden, Mass.	1	1.7
Milwaukee, Wis.	2	.7
Wicomico, Md.	1	.7
St. Louis City, Mo.	1	.7
Williams, Ohio	1	.7
Allen, Ind.	1	.7
Hennepin, Minn.	3	.5
Muskegon, Mich.	1	.4
Erie, Pa.	1	.2
Fannin, Tex.	1	.2
Montgomery, Pa.	1	.2
Total Above Counties	16	8.4
Industry Total	32	8.7
% of U. S.	50.0	96.6
3589—Service and Household Machines, N. E. C.		
Los Angeles, Cal.	30	1.3
Jefferson, Ky.	2	.8
Milwaukee, Wis.	5	.7
Cook, Ill.	23	.5
Philadelphia, Pa.	4	.4
Allegheny, Pa.	3	.4
Kent, Mich.	2	.4
Sangamon, Ill.	1	.4
Jackson, Mich.	1	.4
Hennepin, Minn.	9	.3
Essex, Mass.	1	.2
Hartford, Conn.	1	.2
Rock Island, Ill.	1	.2
Racine, Wis.	3	.2
Elkhart, Ind.	1	.2
Ramsey, Minn.	4	.2
Essex, N. J.	3	.2
Union, N. J.	4	.2
Delaware, Pa.	1	.2
Darke, Ohio	1	.2
Total Above Counties	100	7.6
Industry Total	238	9.6
% of U. S.	42.0	79.2
3591—Valves and Fittings, Except Plumbing		
Cook, Ill.	32	15.2
Wayne, Mich.	19	4.4
Los Angeles, Cal.	61	3.0
Hamilton, Ohio	9	3.0
Hampden, Mass.	3	2.4
McKean, Pa.	2	2.4
Jefferson, Ky.	3	2.1
Cuyahoga, Ohio	19	2.1
Henry, Ill.	1	1.9
Suffolk, Mass.	10	1.8
St. Clair, Mich.	3	1.8
Jefferson, Ala.	1	1.7
Philadelphia, Pa.	23	1.7
Westmoreland, Pa.	1	1.6
Marshall, Iowa	2	1.5
Summit, Ohio	5	1.1
Milwaukee, Wis.	7	1.1
Erie, Pa.	6	1.1
Allegheny, Pa.	11	1.1
Providence, R. I.	5	1.0
Total Above Counties	223	52.0
Industry Total	556	84.4
% of U. S.	40.1	61.6
3592—Fabricated Pipe and Fittings		
Allegheny, Pa.	10	1.9
Harris, Tex.	10	1.0
Los Angeles, Cal.	27	.7
St. Louis City, Mo.	5	.7
Trumbull, Ohio	2	.6
Cook, Ill.	12	.5
Ohio, W. Va.	1	.4
New Castle, Del.	1	.4
Cuyahoga, Ohio	11	.3
Beaver, Pa.	2	.3
Philadelphia, Pa.	11	.3
Oakland, Mich.	1	.2
Hartford, Conn.	3	.2
Queens, N. Y.	5	.2
Mercer, Pa.	2	.2
Belmont, Ohio	1	.2
Washington, Ohio	2	.2
Kosciusko, Ind.	1	.2
Miami, Kan.	1	.2
Summit, Ohio	1	.2
Total Above Counties	109	8.9
Industry Total	250	12.3
% of U. S.	43.6	72.4
3593—Ball and Roller Bearings		
Hartford, Conn.	11	11.0
Stark, Ohio	3	8.2
New Haven, Conn.	2	4.0
Wayne, Mich.	2	3.8
Franklin, Ohio	1	3.4
Erie, Ohio	1	3.2
Litchfield, Conn.	3	2.6
Chautauqua, N. Y.	2	2.4
Union, N. J.	2	2.3
Cook, Ill.	7	2.0
Fairfield, Conn.	5	1.9
Hudson, N. J.	1	1.9
Dutchess, N. Y.	3	1.1
Marion, Ind.	1	.9
Onondaga, N. Y.	2	.9
Crawford, Ohio	1	.9
Washtenaw, Mich.	3	.9
Muskegon, Mich.	1	.5
Philadelphia, Pa.	6	.5
Tuscarawas, Ohio	1	.5
Total Above Counties	58	52.9
Industry Total	102	63.3
% of U. S.	56.9	83.6
3594—Industrial Patterns and Molds		
Wayne, Mich.	89	2.5
Cook, Ill.	128	1.9
Los Angeles, Cal.	182	1.5
Cuyahoga, Ohio	62	1.0
New York, N. Y.	45	.5
Macomb, Mich.	29	.4
Philadelphia, Pa.	29	.4
Essex, N. J.	31	.4
Randolph, Ind.	1	.4
Union, N. J.	21	.4
Fairfield, Conn.	26	.3
Lucas, Ohio	19	.3
Montgomery, Ohio	16	.3
Oakland, Mich.	23	.3
Hampden, Mass.	12	.3
Kings, N. Y.	28	.2
Erie, Pa.	13	.2
Providence, R. I.	17	.2
Allegheny, Pa.	17	.2
Athens, Ohio	1	.2
Total Above Counties	789	11.9
Industry Total	1,800	24.5
% of U. S.	42.7	48.6
3599—Machine Shops		
Los Angeles, Cal.	859	11.2
Cook, Ill.	302	6.2
Cuyahoga, Ohio	213	3.6
Philadelphia, Pa.	119	2.5
Kings, N. Y.	103	2.4
Muskegon, Mich.	8	2.1
Calhoun, Mich.	5	1.7
New Haven, Conn.	64	1.7
Baltimore City, Md.	38	1.6
Middlesex, Mass.	81	1.5
Wayne, Ind.	2	1.5
Hartford, Conn.	54	1.5
Milwaukee, Wis.	88	1.4
Queens, N. Y.	91	1.4
Hudson, N. J.	36	1.3
Oakland, Mich.	90	1.3
New York, N. Y.	108	1.0
Suffolk, Mass.	39	1.0
Erie, N. Y.	67	1.0
Franklin, Ohio	40	.9
Total Above Counties	2,407	46.8
Industry Total	6,832	111.2
% of U. S.	35.2	42.1

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U.S. MANUFACTURING EMPLOYMENT MAP

Prepared by Survey of Industrial Buying Power Research Staff

27" x 41" • In 6 Colors

County manufacturing employment indicated in color—Red for 50M or more; Green for 25-50M; Yellow for 10-25M; Blue for 5-10M. Relation of county employment to U.S. average also indicated. Price $3.50 each; $3.00 each for two or more.

Map Department

SALES MANAGEMENT, 386 Fourth Avenue, New York 16, N.Y.

Manufacture of Electrical Machinery—S.I.C. 36

SM Estimates of 100 Counties with 84.2% of 1957 Employment

COUNTY and STATE	No. of Plants	SM Employment (thou.)	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Cook, Ill.	581	128.3	St. Louis, Mo.	13	17.1	Baltimore, Md.	7	12.7	Suffolk, Mass.	67	7.6	Lancaster, Pa.	11	5.6
Los Angeles, Cal.	543	46.2	Schenectady, N. Y.	10	17.0	Genesee, Mich.	3	12.4	Passaic, N. J.	42	7.4	Lehigh, Pa.	11	5.6
Milwaukee, Wis.	84	32.6	Onondaga, N. Y.	13	16.8	New York County, N. Y.	293	12.1	Middlesex, N. J.	17	7.1	Forsyth, N. C.	5	5.4
Philadelphia, Pa.	163	31.8	Marion, Ind.	36	16.4	Berkshire, Mass.	5	11.9	Union, N. J.	84	6.9	Bristol, Mass.	10	5.3
Essex, N. J.	171	31.6	Queens, N. Y.	150	16.0	Hartford, Conn.	47	10.8	New Haven, Conn.	49	6.8	Jackson, Mo.	39	5.3
Hudson, N. J.	63	27.9	Camden, N. J.	16	14.6	Erie, N. Y.	25	10.1	Monroe, Ind.	4	6.6	Montgomery, Pa.	25	5.1
Allegheny, Pa.	36	21.7	Fairfield, Conn.	76	14.6	Mercer, Pa.	4	8.4	Ulster, N. Y.	5	6.3	Elk, Pa.	10	5.0
Middlesex, Mass.	93	21.5	Monroe, N. Y.	27	14.3	Hamilton, Ohio	37	8.4	Santa Clara, Cal.	23	6.1	Howard, Ind.	3	4.9
Essex, Mass.	50	21.4	Allen, Ind.	16	14.3	Westchester, N. Y.	88	8.0	Daviess, Ky.	2	6.0	Niagara, N. Y.	11	4.9
Cuyahoga, Ohio	129	18.3	Kings, N. Y.	174	14.1	Lucas, Ohio	17	7.9	Wayne, Mich.	89	5.9	Bergen, N. J.	60	4.7
Madison, Ind.	3	17.3	Montgomery, Ohio	20	13.3	San Mateo, Cal.	23	5.8	Oneida, N. Y.	10	4.7			

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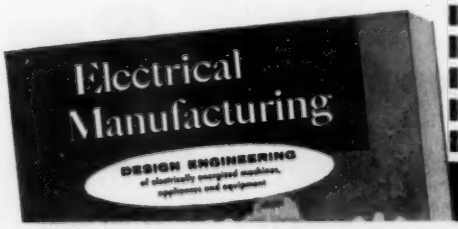

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SM S I C Manufacture of Electrical Machinery—S.I.C. 36 (Cont'd)

SM Estimates for 100 Counties with 84.2% of 1957 Employment (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.)	COUNTY and STATE	No. of Plants	SM Employment (thou.)	COUNTY and STATE	No. of Plants	SM Employment (thou.)	COUNTY and STATE	No. of Plants	SM Employment (thou.)	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Linn, Iowa	7	4.6	Sangamon, Ill.	7	3.4	Seneca, Ohio	7	2.9	Westmoreland, Pa.	9	2.5	Muskingum, Ohio	3	2.2
Hampden, Mass.	22	4.3	Washington, Pa.	4	3.4	Beaver, Pa.	3	2.9	Lackawanna, Pa.	10	2.5	Shiawassee, Mich.	5	2.1
Somerset, N. J.	9	4.2	Allen, Ohio	6	3.2	Strafford, N. H.	6	2.8	Calhoun, Ala.	1	2.5	Morris, N. J.	31	2.1
Dallas, Tex.	25	4.2	Mercer, N. J.	16	3.0	Stephenson, Ill.	4	2.8	Lycoming, Pa.	6	2.4			
Norfolk, Mass.	21	4.1	Worcester, Mass.	33	3.0	McLean, Ill.	5	2.7	Washtenaw, Mich.	8	2.3	Total Above Counties	4,134	932.0
Delaware, N. Y.	1	3.8	Racine, Wis.	22	3.0	Grant, Ind.	9	2.7	Litchfield, Conn.	17	2.3			
Providence, R. I.	20	3.6	Erie, Pa.	13	3.0	Cabell, W. Va.	4	2.7	Windham, Conn.	7	2.3	% of U.S.A. Total	71.8	84.2
Hennepin, Minn.	49	3.6	Lake, Ill.	21	3.0	Richland, Ohio	9	2.7	Bronx, N. Y.	65	2.3			
Nassau, N. Y.	65	3.4	Greene, Tenn.	2	3.0	Fayette, Ind.	1	2.6	Kane, Ill.	17	2.2			
Monmouth, N. J.	24	3.4	Hillsborough, N. H.	12	2.9	Trumbull, Ohio	10	2.6	Bartholomew, Ind.	5	2.2			
Chemung, N. Y.	2	3.4				McHenry, Ill.	7	2.5	Berks, Pa.	11	2.2			

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 36

This is the standout among major groups for large gains by 4-digit industries, which here total 21. Some of the top gainers include electrical welding apparatus, up 97%; telephone and telegraphic equipment, 79%; insulated wire and cable, 76%; phonograph records, 75%; carbon and graphite products 74%, and communication equipment, 74%. In contrast to these unusually heavy gains, the radio and television component showed a decline of 1%, reflecting to a large extent decline in product prices since the 1954 Census year. S.I.C. 36 includes manufacturers of machinery, apparatus, and supplies for the generation, storage, transmission, transformation and utilization of electrical energy. The manufacture of electric household appliances is included in this group, but industrial machinery and equipment powered by built-in or detachable electric motors is classified in S.I.C. 35.

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	Gross Sales Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957	S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	Gross Sales Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
361	*Electrical industrial apparatus*						3614	Motors and generators	309	1,389	1,833	112.0	109.8
3611	Wiring devices and supplies	395	584	917	43.2	55.9	3615	Transformers	164	686	899	41.0	41.2
3612	Carbon and graphite products	53	111	193	8.3	12.1	3616	Electrical control apparatus	452	1,097	1,580	79.3	89.2
3613	Electrical measuring instruments	303	359	578	33.0	42.0	3617	Electrical welding apparatus	119	169	333	8.2	14.5

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SM S I C Manufacture of Electrical Machinery—(Cont'd)

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 36 (Continued)

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	Gross Sales Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
3619	Elec. industrial apparatus, n. e. c.	235	183	302	15.0	18.9
3621	Electrical appliances	365	795	1,034	48.6	40.0
3631	Insulated wire and cable	136	323	568	14.4	15.6
3641	Engine electrical equipment	169	587	675	46.3	49.7
3651	Electric lamps (bulbs)	66	326	434	22.0	27.9
366	*Communication equipment*					
3661	Radios and related products	1,753	5,861	5,604	294.0	313.1
3662	Electronic tubes	157	710	951	71.0	87.9
3663	Phonograph records	143	85	149	6.2	11.7
3664	Telephone and telegraphic equip.	74	797	1,427	64.7	110.5
3669	Communication equipment, n. e. c.	141	100	174	10.1	16.7
369	*Electrical products, n. e. c.*					
3691	Storage batteries	308	341	375	15.7	18.7
3692	Primary batteries	41	122	132	10.8	12.0
3693	X-Ray and therapeutic apparatus	130	80	91	7.1	7.8
3699	Electrical products, n. e. c.	245	119	156	8.5	11.4

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 36

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
3611—Wiring Devices and Supplies		
Cook, Ill.	38	6.4
Fairfield, Conn.	13	5.2
Kings, N. Y.	17	3.8
Los Angeles, Cal.	23	3.6
Hartford, Conn.	6	3.2
Onondaga, N. Y.	2	2.6
Allegheny, Pa.	8	2.3
Union, N. J.	7	2.2
Queens, N. Y.	10	1.5
Beaver, Pa.	1	1.5
Providence, R. I.	5	1.5
Montgomery, Pa.	4	1.1
New York, N. Y.	22	1.1
Jefferson, Ala.	3	1.0
Bristol, Mass.	2	.9
Richland, Ohio	1	.9
Mercer, N. J.	3	.9
Kent, R. I.	1	.5
Hudson, N. J.	2	.5
Boone, Mo.	1	.5
Total Above Counties	169	41.2
Industry Total	395	55.9
% of U. S.	42.8	73.7
3612—Carbon and Graphite Products		
Niagara, N. Y.	5	2.4
Elk, Pa.	4	2.4
Cuyahoga, Ohio	6	1.6
Harrison, W. Va.	2	.9
Maury, Tenn.	1	.9
Seneca, Ohio	1	.9
Queens, N. Y.	2	.5
Burke, N. C.	1	.5
Jefferson, Pa.	1	.3
Cook, Ill.	4	.3
Total Above Counties	27	10.7
Industry Total	53	12.1
% of U. S.	50.9	88.4
3613—Electrical Measuring Instruments		
Essex, N. J.	14	8.2
Essex, Mass.	1	5.8
Sangamon, Ill.	2	3.2
Cook, Ill.	17	2.5
Los Angeles, Cal.	42	2.2
Strafford, N. H.	1	2.1
Queens, N. Y.	9	2.1
Middlesex, Mass.	12	1.1
Cuyahoga, Ohio	6	1.1
Santa Clara, Cal.	1	.9
Tippecanoe, Ind.	1	.9
Kings, N. Y.	8	.7
Philadelphia, Pa.	12	.7
Allen, Ohio	1	.5
Washington, Ore.	1	.5
New York, N. Y.	13	.5
Lehigh, Pa.	1	.5
Kalamazoo, Mich.	1	.5
Wake, N. C.	1	.5
Contra Costa, Cal.	1	.5
Total Above Counties	145	35.0
Industry Total	303	42.0
% of U. S.	47.9	83.3
3614—Motors and Generators		
Montgomery, Ohio	7	10.8
Allen, Ind.	6	6.3
Schenectady, N. Y.	2	5.9
Allegheny, Pa.	5	5.6
Erie, N. Y.	3	5.4
Monroe, N. Y.	4	4.9
Cuyahoga, Ohio	14	4.7
St. Louis City, Mo.	6	4.6
Milwaukee, Wis.	3	3.4
Essex, Mass.	1	3.0
Monmouth, N. J.	1	3.0
Allen, Ohio	3	2.8
St. Louis, Mo.	1	2.1
Hamilton, Ohio	3	1.7
Clark, Ohio	1	1.5
Essex, N. J.	7	1.5
Somerset, N. J.	2	1.4
Cook, Ill.	20	1.4
New Haven, Conn.	5	1.3
Hennepin, Minn.	4	1.3
Total Above Counties	98	72.6
Industry Total	309	109.8
% of U. S.	31.7	66.1
3615—Transformers		
Berkshire, Mass.	2	8.0
Mercer, Pa.	1	7.7
Cook, Ill.	17	3.3
Santa Clara, Cal.	2	3.3
Allegheny, Pa.	1	2.5
Milwaukee, Wis.	3	1.9
Washington, Pa.	1	1.6
Allen, Ind.	1	1.3
St. Louis, Mo.	3	1.3
St. Louis City, Mo.	1	1.2
Muskingum, Ohio	1	.7
Vermilion, Ill.	1	.7
Hampden, Mass.	1	.7
Floyd, Ga.	1	.7
Bay, Mich.	1	.7
Hudson, N. J.	3	.6
Alameda, Cal.	6	.3
Essex, N. J.	10	.3
Cuyahoga, Ohio	1	.2
Madison, Ill.	1	.2
Total Above Counties	58	37.2
Industry Total	164	41.2
% of U. S.	35.4	90.3
3616—Electrical Control Apparatus		
Milwaukee, Wis.	13	14.2
Philadelphia, Pa.	11	10.7
Cook, Ill.	48	5.9
Schenectady, N. Y.	3	4.8
Allegheny, Pa.	5	4.7
Wayne, Mich.	19	3.5
Los Angeles, Cal.	34	3.4
St. Louis City, Mo.	8	3.4
Hartford, Conn.	9	3.0
Cuyahoga, Ohio	15	2.8
Beaver, Pa.	1	2.1
Stephenson, Ill.	1	1.9
Kings, N. Y.	16	1.7
Essex, N. J.	10	1.6
Westchester, N. Y.	5	1.5
Middlesex, Mass.	4	1.2
Suffolk, Mass.	8	1.1
Westmoreland, Pa.	2	.9
Frederick, Md.	2	.8
Union, N. J.	2	.8
Total Above Counties	216	70.1
Industry Total	452	89.2
% of U. S.	47.8	78.6
3617—Electrical Welding Apparatus		
Cuyahoga, Ohio	5	2.2
Miami, Ohio	1	1.2
Wayne, Mich.	12	1.0
Cook, Ill.	9	1.0
York, Pa.	3	.9
Trumbull, Ohio	2	.9
Bay, Mich.	5	.9
Milwaukee, Wis.	4	.7
Hennepin, Minn.	2	.7
Baltimore, Md.	2	.5
Macomb, Mich.	4	.5
Essex, Mass.	1	.3
Delaware, Pa.	1	.3
Larimer, Col.	1	.3
Delta, Mich.	1	.3
Oakland, Mich.	4	.3
Outagamie, Wis.	1	.3
Los Angeles, Cal.	8	.3
Philadelphia, Pa.	2	.3
Total Above Counties	68	12.9
Industry Total	119	14.5
% of U. S.	57.1	90.0
3619—Electrical Industrial Apparatus		
Cook, Ill.	23	1.7
Bristol, Mass.	1	1.6
Essex, Mass.	3	1.1
Milwaukee, Wis.	4	1.0
Los Angeles, Cal.	35	1.0
Middlesex, N. J.	2	.9
Passaic, N. J.	1	.9
Fairfield, Conn.	1	.5
McCracken, Ky.	1	.5
Cuyahoga, Ohio	8	.5
Monroe, Ind.	1	.5
Franklin, Ohio	1	.5
Queens, N. Y.	7	.4
Kings, N. Y.	10	.4
York, Me.	1	.2
New Haven, Conn.	3	.2
Wabash, Ind.	1	.2
Tazewell, Va.	1	.2
Hartford, Conn.	3	.2
Crawford, Ohio	1	.2
Total Above Counties	108	12.2
Industry Total	235	18.9
% of U. S.	46.0	84.6
3621—Electrical Appliances		
Cook, Ill.	43	8.9
Richland, Ohio	3	5.8
Fairfield, Conn.	4	3.0
Hartford, Conn.	7	2.6
Allegheny, Pa.	3	1.2

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Manufacture of Electrical Machinery—S.I.C. 36 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 36 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Kane, Ill.	2	1.1
Jefferson, Ky.	2	1.0
Milwaukee, Wis.	4	.9
Litchfield, Conn.	5	.8
New York, N. Y.	20	.7
Queens, N. Y.	11	.7
St. Louis City, Mo.	5	.7
Los Angeles, Cal.	29	.7
San Bernardino, Cal.	1	.6
Dodge, Wis.	1	.6
Licking, Ohio	1	.6
Racine, Wis.	2	.6
Lancaster, Pa.	1	.6
Philadelphia, Pa.	4	.6
Erie, N. Y.	3	.4
Total Above Counties	142	32.2
Industry Total	365	40.0
% of U. S.	38.9	80.5

3631—Insulated Wire and Cable

Middlesex, Mass.	4	1.5
Middlesex, N. J.	4	1.2
New Haven, Conn.	8	1.2
Union, N. J.	6	.9
Worcester, Mass.	8	.9
Providence, R. I.	4	.9
Passaic, N. J.	4	.9
Oneida, N. Y.	2	.8
Mercer, N. J.	1	.8
Cook, Ill.	9	.5
St. Louis City, Mo.	1	.4
Hudson, N. J.	1	.4
Hampden, Mass.	2	.4
Rockingham, N. H.	1	.4
Warren, Pa.	1	.4
Broome, N. Y.	1	.4
Grant, Ind.	1	.4
De Kalb, Ill.	1	.4
Kings, N. Y.	7	.4
Harris, Tex.	1	.2
Total Above Counties	67	13.4
Industry Total	136	15.6
% of U. S.	49.3	85.9

3641—Engine Electrical Equipment

Madison, Ind.	1	14.3
Lucas, Ohio	3	7.0
Delaware, N. Y.	1	4.7
Washtenaw, Mich.	1	2.3
Lake, Ill.	2	1.6
Hampden, Mass.	5	1.3
Cass, Ind.	2	1.2
Seneca, Ohio	1	1.2
Cook, Ill.	14	.9
Queens, N. Y.	6	.9
Fulton, Ohio	1	.7
Onondaga, N. Y.	1	.7
Suffolk, Mass.	2	.7
Fairfield, Ohio	1	.7
Union, N. J.	2	.7
Essex, N. J.	3	.7
Susquehanna, Pa.	1	.7
Rock, Wis.	1	.4
Northampton, Pa.	1	.4
White, Ind.	1	.4
Total Above Counties	50	41.5
Industry Total	169	49.7
% of U. S.	29.6	83.5

3651—Electric Lamps

Essex, N. J.	7	7.2
Cuyahoga, Ohio	6	2.5
Essex, Mass.	4	2.5
Trumbull, Ohio	2	1.4
Marion, W. Va.	1	1.4
Lycoming, Pa.	1	.9
Sandusky, Ohio	1	.9
Mercer, N. J.	1	.9
Coles, Ill.	1	.9
Mahoning, Ohio	1	.9
Pulaski, Ark.	1	.8
Suffolk, Mass.	1	.8
Madison, Ky.	1	.5
Crawford, Ohio	1	.5
St. Louis City, Mo.	2	.5
Pickaway, Ohio	1	.5
Hinds, Miss.	1	.5
Hudson, N. J.	3	.5
Shelby, Tenn.	1	.5
Pickens, Ala.	1	.5
Total Above Counties	19	25.1
Industry Total	66	27.9
% of U. S.	28.8	90.0

3661—Radios and Related Products

Cook, Ill.	228	45.9
Los Angeles, Cal.	184	21.8
Camden, N. J.	13	14.1
Philadelphia, Pa.	30	13.4
Onondaga, N. Y.	4	9.0
Baltimore City, Md.	5	7.4
Queens, N. Y.	61	6.7
Marion, Ind.	13	6.7
Forsyth, N. C.	1	5.1
Linn, Iowa	3	5.0
Hudson, N. J.	18	5.0
Middlesex, Mass.	39	4.9
New York, N. Y.	97	4.5
Essex, N. J.	49	4.4
Howard, Ind.	2	4.4
Kings, N. Y.	45	4.3
Berkshire, Mass.	1	3.9
Oneida, N. Y.	3	3.8
Monroe, Ind.	3	3.8
Bergen, N. J.	21	3.8
Total Above Counties	820	177.9
Industry Total	1,752	295.6
% of U. S.	46.8	60.2

3662—Electronic Tubes

Middlesex, Mass.	8	12.2
Daviess, Ky.	1	5.6
Essex, Mass.	7	5.4
Hudson, N. J.	3	5.0
Essex, N. J.	18	4.7
Lancaster, Pa.	1	4.0
Lehigh, Pa.	1	3.8
Montgomery, Pa.	3	3.6
Marion, Ind.	1	2.8
Perry, Ind.	1	2.6
Cook, Ill.	9	2.6
Steuben, N. Y.	1	2.3
Norfolk, Mass.	2	2.3
Grant, Ind.	1	2.1
Middlesex, N. J.	1	2.1
Calhoun, Ala.	1	2.0
San Mateo, Cal.	3	1.9
Putnam, Ohio	1	1.9
Carbon, Pa.	1	1.9
Cameron, Pa.	1	1.7
Total Above Counties	65	70.5
Industry Total	157	94.8
% of U. S.	41.4	74.4

3663—Phonograph Records

Fairfield, Conn.	3	2.2
Marion, Ind.	1	2.0
Los Angeles, Cal.	39	1.6
Lackawanna, Pa.	2	1.3
New York, N. Y.	41	.9
Fulton, N. Y.	1	.7
Essex, N. J.	5	.7
Wayne, Ind.	1	.7
Jefferson, Ky.	1	.4
Worcester, Mass.	1	.4
Total Above Counties	95	10.9
Industry Total	143	11.7
% of U. S.	66.4	93.2

3664—Telephone and Telegraph Equipment

Cook, Ill.	13	50.8
Hudson, N. J.	4	21.3
Marion, Ind.	1	10.1
Essex, Mass.	3	5.7
Monroe, N. Y.	1	4.8
Baltimore City, Md.	1	3.6
Lancaster, Neb.	1	1.9
San Mateo, Cal.	2	1.2
St. Louis, Minn.	1	1.2
Crawford, Ohio	1	1.2
New Haven, Conn.	1	1.2
Suffolk, Mass.	2	1.2
Union, N. J.	2	.8
New York, N. Y.	6	.7
De Kalb, Ill.	1	.7
Kings, N. Y.	6	.5
Davidson, Tenn.	2	.3
Morris, N. J.	1	.3
Hardin, Ohio	1	.3
Olmstead, Minn.	1	.3
Total Above Counties	51	108.2
Industry Total	74	110.5
% of U. S.	68.9	97.9

3669—Communications Equipment, N.E.C.

Allegheny, Pa.	1	5.7
Monroe, N. Y.	4	2.4
Fairfield, Conn.	2	1.8
New York, N. Y.	11	1.1
Cook, Ill.	18	1.0
Worcester, Mass.	1	.6
Middlesex, Mass.	2	.6
Queens, N. Y.	6	.5
Essex, Mass.	3	.3
Richland, Ohio	1	.3
Lenawee, Mich.	1	.3
Kings, N. Y.	4	.3
Stark, Ohio	1	.3
Total Above Counties	55	15.2
Industry Total	141	16.7
% of U. S.	39.0	91.0

3691—Storage Batteries

Philadelphia, Pa.	4	2.1
Delaware, Ind.	2	1.3
Essex, N. J.	1	1.3
Los Angeles, Cal.	39	1.1
Niagara, N. Y.	2	.8
Berks, Pa.	4	.8
Cuyahoga, Ohio	2	.8
Cook, Ill.	16	.8
Dallas, Tex.	6	.7
Fulton, Ga.	5	.6
Knox, Ind.	1	.5
Shiawassee, Mich.	1	.5
Middlesex, N. J.	1	.5
Kankakee, Ill.	1	.5
Mercer, N. J.	1	.5
Erie, N. Y.	2	.5
Muskingum, Ohio	1	.2
Leavenworth, Kan.	1	.2
Fairfield, Conn.	3	.2
Montgomery, Pa.	1	.2
Total Above Counties	94	14.1
Industry Total	101	18.7
% of U. S.	93.1	75.4

3692—Primary Batteries

Cuyahoga, Ohio	3	2.1
Stephenson, Ill.	2	.9
Dubuque, Iowa	1	.8
Dane, Wis.	1	.8
Bennington, Vt.	1	.8
Westchester, N. Y.	2	.5
Sandusky, Ohio	1	.5
Woodbury, Iowa	1	.5
Marathon, Wis.	1	.5
Madison, Tenn.	1	.5
Lycoming, Pa.	1	.5
Mecklenberg, N. C.	1	.5
New Haven, Conn.	1	.5
Passaic, N. J.	1	.5
Montgomery, Iowa	1	.5
Worcester, Mass.	1	.2
Essex, N. J.	1	.2
Juneau, Wis.	1	.2
Jo Daviess, Ill.	1	.2
Fond du Lac, Wis.	1	.2
Total Above Counties	24	11.4
Industry Total	41	12.0
% of U. S.	58.5	95.0

3693—X-Ray and Therapeutic Apparatus

Milwaukee, Wis.	4	2.0
Cook, Ill.	24	1.0
Fairfield, Conn.	5	.7
Hamilton, Ohio	2	.5
Kenton, Ky.	1	.5
Baltimore City, Md.	1	.5
Cuyahoga, Ohio	3	.5
Westchester, N. Y.	4	.5
Middlesex, Mass.	2	.5
Los Angeles, Cal.	13	.2
Rock, Wis.	1	.2
New York, N. Y.	13	.1
Total Above Counties	73	7.2
Industry Total	130	7.8
% of U. S.	56.2	92.3

3699—Electrical Products, N.E.C.

Providence, R. I.	3	1.0
Buchanan, Mo.	1	1.0
Essex, N. J.	7	.9
Queens, N. Y.	5	.7
Kings, N. Y.	22	.7
Westchester, N. Y.	4	.6
Cook, Ill.	20	.6
Cuyahoga, Ohio	11	.6
Los Angeles, Cal.	20	.4
Hennepin, Minn.	8	.4
De Kalb, Ill.	1	.3
Hudson, N. J.	5	.3
Wayne, N. C.	1	.3
Ashtabula, Ohio	2	.3
Bronx, N. Y.	4	.3
Essex, Mass.	3	.3
New York, N. Y.	24	.3
Osceola, Mich.	1	.3
Lamar, Tex.	1	.3
Fairfield, Conn.	3	.1
Total Above Counties	146	9.7
Industry Total	245	11.4
% of U. S.	59.6	85.1

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SM S I C Manufacture of Transportation Equipment—S.I.C. 37

SM Estimates for 100 Counties with 91.6% of 1957 Employment

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Los Angeles, Cal.	787	256.8	Fairfield, Conn.	43	19.7	Montgomery, Ohio	27	9.0	Maricopa, Ariz.	11	5.4	Schenectady, N. Y.	4	3.6
Wayne, Mich.	194	185.8	Cobb, Ga.	1	19.3	Union, N. J.	17	8.9	Onondaga, N. Y.	9	5.2	Oneida, N. Y.	5	3.6
Cuyahoga, Ohio	103	58.3	Franklin, Ohio	21	18.4	Washington, Md.	2	8.8	Clay, Mo.	4	5.2	Fulton, Ga.	13	3.5
Genesee, Mich.	18	55.4	Delaware, Pa.	14	16.8	Jefferson, Ala.	12	8.5	Monroe, N. Y.	8	5.1	Duval, Fla.	18	3.4
King, Wash.	58	48.2	Niagara, N. Y.	9	15.8	Saginaw, Mich.	14	8.3	Lake, Ind.	9	5.1	Alamance, N. C.	1	3.3
St. Louis, Mo.	15	46.4	Nassau, N. Y.	57	14.9	Middlesex, Mass.	23	8.0	Trumbull, Ohio	7	5.1	Monroe, Mich.	2	3.3
Hartford, Conn.	41	44.8	Macomb, Mich.	34	12.7	Camden, N. J.	8	7.8	La Porte, Ind.	7	4.8	Sacramento, Cal.	6	3.3
Cook, Ill.	192	44.4	Newport News, Va.	7	12.2	Butler, Ohio	10	7.5	Bay, Mich.	8	4.7	Berrien, Mich.	11	3.2
San Diego, Cal.	45	41.6	Jackson, Mo.	28	11.8	Kings, N. Y.	88	7.4	Norfolk, Mass.	11	4.5	Norfolk, Va.	17	3.2
Sedgwick, Kan.	40	40.3	Allegheny, Pa.	17	11.6	Alameda, Cal.	49	7.2	Jefferson, Ky.	6	4.5	Hudson, N. J.	23	3.2
Baltimore, Md.	10	39.3	Kent, Mich.	19	10.7	Lorain, Ohio	9	7.2	Ramsey, Minn.	15	4.4	Lycoming, Pa.	2	3.0
Oakland, Mich.	51	32.7	Lucas, Ohio	25	10.4	Essex, Mass.	32	6.5	Clark, Ohio	7	4.3	Bucks, Pa.	9	3.0
Tarrant, Tex.	25	31.2	Summit, Ohio	11	10.2	New Haven, Conn.	27	6.5	Jackson, Miss.	7	4.2	Santa Clara, Cal.	6	3.0
Erie, N. Y.	38	30.3	Washtenaw, Mich.	13	10.1	Jackson, Mich.	27	6.4	Lehigh, Pa.	2	4.2	Howard, Ind.	3	2.9
Marion, Ind.	38	30.2	Wyandotte, Kan.	4	9.8	Essex, N. J.	30	6.4	Polk, Iowa	10	4.1	De Kalb, Ga.	4	2.8
Hamilton, Ohio	24	26.5	Tulsa, Okla.	18	9.8	Erie, Pa.	9	6.3	Winnebago, Ill.	11	4.0	San Francisco, Cal.	28	2.8
Dallas, Tex.	24	25.0	Philadelphia, Pa.	39	9.7	Delaware, Ind.	4	6.2	Davidson, Tenn.	8	3.9			
Bergen, N. J.	18	24.9	Kenosha, Wisc.	4	9.6	Calhoun, Mich.	6	6.2	New Castle, Del.	5	3.9	Total Above		
Suffolk, N. Y.	59	24.2	Milwaukee, Wisc.	27	9.5	Orleans, La.	33	6.2	Mobile, Ala.	20	3.8	Counties	2,988	16,674
St. Joseph, Ind.	12	21.8	Allen, Ind.	7	9.3	Rock, Wisc.	7	6.1	Fresno, Cal.	13	3.8			
Ingham, Mich.	8	21.7	Vanderburgh, Ind.	9	9.3	Westchester, N. Y.	19	6.1	Berks, Pa.	10	3.7	% of U.S.A. Total	55.9	91.6

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 37

The 14 component industries of this major group reflect the continuing twentieth-century advances in transportation. The continuing boom in recreational boating since 1954 is mirrored in the 79% jump in boat building and repairing. It also helps to account for the 95% increase in automobile trailers since boat enthusiasts have been trending strongly to purchases of trailers to transport their craft to and from the boating areas. The sharp rise of 83% in locomotives and parts and 67% in railroad and street cars reflects some fulfillment during the past three years of the long-deferred equipment replacement needs of these industries, as well as the active, rising business backgrounds during those years. Wheel-type tractors, except contractors' off-highway types, are classified in code 3522, track laying tractors in 3531, stamped body parts for passenger cars, buses and trucks in 3461, tires and tubes in 3011, vehicular lighting equipment in 3642, ignition systems in 3694, storage batteries in 3691, aeronautical electrical equipment in 3694, and aeronautical instruments in 3811.

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	Gross Sales Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
371	*Motor vehicles and equipment*					
3713	Truck and bus bodies	564	233	326	16.7	21.6
3715	Truck and trailers	130	306	419	16.4	18.5
3716	Automobile trailers	275	231	450	11.1	18.8
3717	Motor vehicles and parts	1,226	9,475	12,886	649.3	645.5
372	*Aircraft and parts*					
3721	Aircraft	72	6,267	8,022	457.6	535.9
3722	Aircraft engines	234	3,189	4,082	167.4	182.3
3723	Aircraft propellers	16	210	269	16.5	20.0
3729	Aircraft equipment, n. e. c.	1,982	2,343	2,999	180.9	189.7
373	*Ships and boats*					
3731	Ship building and repairing	355	1,078	1,240	109.5	124.6
3732	Boat building and repairing	1,154	154	276	16.9	18.1
374	*Railroad equipment*					
3741	Locomotives and parts	29	429	785	20.9	24.1
3742	Railroad and street cars	57	498	828	30.7	33.3
3751	Motorcycles and bicycles	46	98	128	7.1	7.5
3799	Transportation equipment, n. e. c.	108	22	22	1.6	1.3

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4. Construction Equipment & Industrial Trucks	1,111,000,000
5. Tractors & Powered Farm Equipment	1,200,000,000
6. Military Vehicles	900,000,000
7. Engines (excluding automotive and aircraft)	849,000,000
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1. **Passenger Cars**
   - Combustion Chamber Designs of 1958 Passenger Car Engines
   - Air Springs in Passenger Car Chassis
   - Ceramic Tooling at Ford
2. **Aviation**
   - Machining Aircraft Parts at Douglas
   - Crusader Fighter Production at Chance Vought
   - Jet Engine Weight Control
3. **Trucks, Trailers, Buses**
   - Truck Body Production at Twin Coach
   - Dual-Drive Tandem for Trucks
   - Truck Styling Significance
4. **Powered Construction and Materials Handling Equipment**
   - Construction Equipment Trends
   - Autocar Off-Highway Vehicle
   - German Industrial Truck
5. **Tractors and Farm Equipment**
   - Free-Piston Tractor Powerplant
   - British-Built Ferguson Tractor Tooling
   - Tractor Uses Air Pillows for Wheels
6. **Powered Military Equipment**
   - Small Military Standard Engines
   - Cargo Vehicle Specifications
   - Government Contract Awards
7. **Engines** (except car, truck, aircraft)
   - Engine Production Equipment at Hercules
   - Shell-Molded Crankshafts for Outboard Motors
   - Compact Gas Turbine Has Back-To-Back Rotors
8. **Replacement Parts and Accessories**
   - Parts Production at AC Spark Plug
   - Generator Capabilities
   - Storage Battery Production at Globe-Union

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INDUSTRY	NO. OF READERS
Passenger cars	3,954
Aviation	2,223
Trucks, Trailers, Buses	831
Construction and Materials Handling Equipment	1,236
Tractors, Farm Equipment	828
Powered Military Equipment	1,270
Engines (except automotive and aircraft)	684
Replacement Parts and Accessories	8,255

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SM S I C Manufacture of Transportation Equipment—(Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 37

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
3713—Truck and Bus Bodies		
Crawford, Ohio	3	1.1
Wayne, Ind.	2	1.0
Los Angeles, Cal.	29	.8
Madison, N. Y.	1	.8
Allen, Ohio	2	.8
St. Louis City, Mo.	8	.7
Wayne, Ohio	4	.6
Queens, N. Y.	11	.6
Logan, Ohio	1	.5
Berks, Pa.	5	.5
Marion, Ohio	1	.5
Attala, Miss.	1	.5
Peach, Ga.	1	.5
Kane, Ill.	2	.4
Essex, N. J.	7	.4
Lawrence, Ind.	1	.2
York, Pa.	1	.2
Allegheny, Pa.	5	.2
Randolph, Ind.	2	.2
Cuyahoga, Ohio	6	.2
Total Above Counties	93	10.7
Industry Total	564	21.6
% of U. S.	16.5	49.5
3715—Truck Trailers		
Lorain, Ohio	1	2.0
Jackson, Mo.	3	1.6
Los Angeles, Cal.	14	1.2
Hamilton, Ohio	2	1.1
Shelby, Tenn.	3	.8
Hampden, Mass.	1	.8
Allen, Ind.	1	.8
Tarrant, Tex.	3	.5
Rock, Wis.	2	.5
Kane, Ill.	1	.5
Greene, Mo.	1	.5
Kalamazoo, Mich.	1	.5
Philadelphia, Pa.	1	.5
Coffee, Ala.	1	.5
Chatham, Ga.	1	.5
Cook, Ill.	4	.5
Allen, Ohio	1	.5
Hennepin, Minn.	1	.5
Clay, Mo.	1	.5
Jefferson, Ky.	2	.3
Total Above Counties	45	14.6
Industry Total	130	18.5
% of U. S.	34.6	78.9
3716—Automobile Trailers		
Los Angeles, Cal.	56	2.7
Elkhart, Ind.	24	2.1
Gratiot, Mich.	5	1.2
Tulsa, Okla.	1	1.2
Sanilac, Mich.	4	.7
Cook, Ill.	13	.7
Marshall, Ind.	4	.5
Cass, Mich.	3	.3
Saginaw, Mich.	4	.3
Wood, Wis.	2	.3
Warren, Miss.	1	.3
Madison, Ind.	2	.3
Lapeer, Mich.	1	.3
Saginaw, Mich.	2	.3
Bay, Mich.	2	.3
Iosco, Mich.	1	.3
Livingston, Mich.	1	.3
Branch, Mich.	1	.3
Gogebic, Mich.	1	.3
Oakland, Mich.	1	.3
Total Above Counties	129	13.0
Industry Total	275	18.8
% of U. S.	46.9	69.1
3717—Motor Vehicles and Parts		
Wayne, Mich.	122	188.5
Genesee, Mich.	10	61.0
Cuyahoga, Ohio	39	30.8
Oakland, Mich.	21	29.4
Ingham, Mich.	7	20.7
Erie, N. Y.	8	20.2
Los Angeles, Cal.	144	15.0
Marion, Ind.	18	12.4
Macomb, Mich.	18	11.8
Cook, Ill.	100	10.7
St. Joseph, Ind.	3	10.6
Lucas, Ohio	11	10.2
Washtinaw, Mich.	9	9.5
Saginaw, Mich.	5	7.9
Union, N. J.	7	7.2
Kent, Mich.	9	6.9
Kenosha, Wis.	2	6.8
Hamilton, Ohio	10	6.2
Vanderburgh, Ind.	2	6.1
Delaware, Ind.	3	5.6
Total Above Counties	551	457.5
Industry Total	1,226	645.5
% of U. S.	44.9	70.9
3721—Aircraft		
Los Angeles, Cal.	19	175.7
Sedgwick, Kan.	4	44.2
King, Wash.	2	43.3
San Diego, Cal.	2	34.0
Suffolk, N. Y.	2	31.9
Tarrant, Tex.	2	24.8
Dallas, Tex.	2	22.4
Baltimore, Md.	1	22.1
Franklin, Ohio	1	17.9
Cobb, Ga.	1	17.4
St. Louis, Mo.	1	15.0
Nassau, N. Y.	1	14.2
Niagara, N. Y.	3	11.8
Tulsa, Okla.	1	9.9
Washington, Md.	1	9.1
Wyandotte, Kan.	1	8.4
Jefferson, Ala.	1	6.3
Delaware, Pa.	1	5.1
Fairfield, Conn.	2	4.8
Alamance, N. C.	1	3.8
Total Above Counties	49	522.0
Industry Total	72	535.9
% of U. S.	68.1	97.4
3722—Aircraft Engines		
Hartford, Conn.	14	32.0
Bergen, N. J.	3	20.9
Cook, Ill.	9	15.2
Hamilton, Ohio	6	15.0
Cuyahoga, Ohio	8	14.1
Marion, Ind.	9	12.8
Fairfield, Conn.	6	8.3
Wayne, Mich.	18	6.1
Jackson, Mo.	1	4.6
New Haven, Conn.	5	4.3
Vigo, Ind.	2	3.3
Polk, Iowa	1	3.0
Delaware, Pa.	1	2.8
Essex, Mass.	3	2.7
Los Angeles, Cal.	19	2.7
Philadelphia, Pa.	4	2.6
Lycoming, Pa.	1	2.6
Middlesex, Mass.	4	2.5
Erie, N. Y.	3	2.4
Oneida, N. Y.	2	2.4
Total Above Counties	119	158.2
Industry Total	234	182.3
% of U. S.	50.9	86.8
3723—Aircraft Propellers		
Hartford, Conn.	2	9.3
Essex, N. J.	1	4.8
Montgomery, Ohio	2	3.3
Arenac, Mich.	1	1.2
Winnebago, Ill.	1	.9
Miami, Ohio	1	.2
Total Above Counties	8	19.5
Industry Total	16	20.0
% of U. S.	50.0	97.5
3729—Aircraft Equipment, N. E. C.		
Los Angeles, Cal.	449	39.1
St. Joseph, Ind.	4	11.9
Cuyahoga, Ohio	27	10.2
Summit, Ohio	6	10.2
Bucks, Pa.	5	8.7
Wayne, Mich.	22	8.3
Erie, N. Y.	8	7.1
San Diego, Cal.	20	5.8
Clay, Mo.	1	4.5
Maricopa, Ariz.	5	3.7
Kent, Mich.	4	3.6
Butler, Ohio	4	3.1
Nassau, N. Y.	26	2.6
Essex, Mass.	2	2.6
Broome, N. Y.	1	2.5
Davidson, Tenn.	1	2.4
Jefferson, N. Y.	1	2.3
Riverside, Cal.	3	2.3
Alameda, Cal.	8	2.2
Cook, Ill.	16	2.2
Total Above Counties	613	135.3
Industry Total	1,082	189.7
% of U. S.	56.7	71.3
3731—Ship Building and Repairing		
Newport News City, Va.	1	16.5
Camden, N. J.	3	8.2
Orleans, La.	13	7.4
New London, Conn.	2	6.4
Jackson, Miss.	5	5.6
Kings, N. Y.	32	5.5
Baltimore City, Md.	9	5.3
Norfolk, Mass.	1	4.9
San Francisco, Cal.	10	3.6
Los Angeles, Cal.	10	3.5
Alameda, Cal.	7	3.1
Mobile, Ala.	3	3.1
Hudson, N. J.	12	3.0
Sagadahoc, Me.	1	2.6
Duval, Fla.	7	2.6
Baltimore, Md.	1	2.5
Delaware, Pa.	1	2.4
Richmond, N. Y.	7	2.4
King, Wash.	12	2.4
Total Above Counties	138	93.6
Industry Total	355	124.6
% of U. S.	38.9	75.1

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SM S I C Manufacture of Transportation Equipment—(Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 37 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
3732—Boat Building and Repairing		
Ottawa, Mich.	4	.7
St. Clair, Mich.	4	.7
San Diego, Cal.	14	.4
Los Angeles, Cal.	35	.4
Fairfield, Conn.	12	.4
Leavenworth, Kan.	1	.4
Denton, Tex.	1	.4
King, Wash.	28	.4
Bronx, N. Y.	7	.3
Hancock, Me.	11	.3
Essex, Mass.	23	.3
Dade, Fla.	22	.3
Harris, Tex.	17	.3
St. Mary, La.	11	.3
Orange, Cal.	20	.2
Suffolk, N. Y.	29	.2
Niagara, N. Y.	1	.2
Barnstable, Mass.	11	.2
Cumberland, N. J.	4	.2
Monmouth, N. J.	16	.2
Total Above Counties	271	5.3
Industry Total	1,154	18.1
% of U. S.	23.5	37.6
3741—Locomotives and Parts		
Cook, Ill.	3	8.4
Erie, Pa.	1	4.9
Delaware, Pa.	1	4.0
Schenectady, N. Y.	2	2.5
Cuyahoga, Ohio	4	1.4
Atchison, Kan.	1	.8
Rock, Wis.	1	.8
Richland, Ohio	1	.5
Coles, Ill.	1	.2
Scott, Iowa	1	.2
Total Above Counties	16	23.7
Industry Total	29	24.1
% of U. S.	55.2	98.4
3742—Railroad and Street Cars		
Philadelphia, Pa.	1	5.5
Lake, Ind.	4	4.6
Allegheny, Pa.	2	4.1
Cook, Ill.	12	4.0
Trumbull, Ohio	1	2.1
Jefferson, Ala.	1	1.6
St. Louis City, Mo.	3	1.5
La Porte, Ind.	1	1.2
Butler, Pa.	1	1.1
Cambria, Pa.	2	.8
Monroe, N. Y.	1	.8
Passaic, N. J.	1	.8
Worcester, Mass.	1	.8
Mercer, Pa.	1	.8
Wayne, Mich.	1	.8
Northumberland, Pa.	1	.8
Mahoning, Ohio	1	.8
Cabell, W. Va.	1	.4
Jefferson, Ill.	1	.4
Albany, N. Y.	1	.2
Total Above Counties	38	33.1
Industry Total	57	33.3
% of U. S.	66.7	99.4
3751—Motorcycles and Bicycles		
Milwaukee, Wis.	2	1.3
Cuyahoga, Ohio	4	1.2
Cook, Ill.	5	1.2
Hampden, Mass.	1	.8
Lancaster, Neb.	1	.4
Mason, Ky.	1	.4
Herkimer, N. Y.	1	.4
Montgomery, Ohio	1	.4
Kings, N. Y.	6	.2
La Porte, Ind.	1	.2
Erie, N. Y.	2	.2
Queens, N. Y.	1	.2
Worcester, Mass.	1	.2
Lorain, Ohio	1	.2
Total Above Counties	28	7.3
Industry Total	46	7.5
% of U. S.	60.9	97.3
3799—Transportation Equipment, N.E.C.		
Los Angeles, Cal.	9	.2
Dauphin, Pa.	1	.2
Total Above Counties	10	.4
Industry Total	108	1.3
% of U. S.	9.3	30.8

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Manufacture of Instruments & Related Products—S.I.C. 38

SM Estimates for 100 Counties with 96.6% of 1957 Employment

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Monroe, N. Y.	50	44.9	Nassau, N. Y.	37	3.6	Montgomery, Pa.	15	1.3	Richmond, N. Y.	2	.5	Lucas, Ohio	10	.3
Cook, Ill.	275	24.3	Kane, Ill.	4	3.3	Wayne, Mich.	45	1.2	Jackson, Mo.	17	.5	Hampshire, Mass.	3	.3
Hennepin, Minn.	31	12.6	Cuyahoga, Ohio	53	3.2	Bronx, N. Y.	38	1.2	Dane, Wis.	4	.5	Jefferson, N. Y.	6	.3
Los Angeles, Cal.	280	11.8	Lancaster, Pa.	6	3.0	Westmoreland, Pa.	1	1.2	Delaware, Ohio	2	.5	Albany, N. Y.	2	.3
Bergen, N. J.	38	11.5	Kent, Mich.	3	2.8	Dinwiddie, Va.	2	1.2	Tulsa, Okla.	17	.5	Washington, Ore.	2	.3
Queens, N. Y.	105	10.5	Allegheny, Pa.	28	2.7	Westchester, N. Y.	39	1.2	Ontario, N. Y.	1	.5	Union, Ohio	2	.3
Philadelphia, Pa.	103	10.4	St. Louis, Mo.	5	2.5	Hamilton, Ohio	26	1.1	Dallas, Tex.	23	.4	New London, Conn.	3	.3
Milwaukee, Wis.	24	7.1	Providence, R. I.	22	2.4	Baltimore, Md.	4	1.0	Davidson, Tenn.	4	.4	Mercer, N. J.	1	.3
New York, N. Y.	320	6.9	Erie, N. Y.	22	2.3	Berks, Pa.	3	1.0	Taylor, Tex.	2	.4	Dickinson, Mich.	1	.3
Middlesex, Mass.	48	6.7	Bucks, Pa.	6	1.9	Orange, Cal.	7	1.0	La Porte, Ind.	4	.4	Delaware, Pa.	8	.3
Middlesex, N. J.	10	6.2	Knox, Tenn.	3	1.9	Union, N. J.	12	1.0	Montgomery, Md.	10	.4	Rensselaer, N. Y.	2	.2
New Haven, Conn.	26	5.6	Scott, Iowa	1	1.9	Harris, Tex.	30	.9	Marion, Ind.	12	.4	King, Wash.	24	.2
Fairfield, Conn.	40	5.6	Passaic, N. J.	11	1.8	Clearfield, Pa.	1	.8	Summit, Ohio	9	.4			
Essex, N. J.	53	5.4	Winnebago, Ill.	4	1.8	Niagara, N. Y.	2	.8	San Francisco, Cal.	20	.4			
Kings, N. Y.	127	5.0	Bristol, Mass.	8	1.8	York, Pa.	2	.8	Windham, Conn.	1	.4	Total Above Counties	2,449	283.6
Broome, N. Y.	8	4.7	Erie, Pa.	5	1.7	Suffolk, N. Y.	21	.8	Sussex, Del.	1	.4			
Worcester, Mass.	16	4.7	Franklin, Ohio	14	1.7	Hampden, Mass.	4	.8	Stark, Ohio	3	.4	% of U.S.A. Total	77.9	96.6
La Salle, Ill.	1	4.4	Litchfield, Conn.	5	1.5	Alameda, Cal.	25	.7	St. Joseph, Ind.	5	.3			
Hartford, Conn.	19	4.0	La Crosse, Wis.	1	1.5	Richland, Ohio	4	.6	Onondaga, N. Y.	9	.3			
Suffolk, Mass.	49	3.8	Pulaski, Ark.	2	1.4	Campbell, Ky.	1	.6	Clark, Ohio	3	.3			
Washtenaw, Mich.	11	3.7	Hudson, N. J.	20	1.4	San Diego, Cal.	10	.6	Dade, Fla.	8	.3			
Norfolk, Mass.	17	3.7	Lackawanna, Pa.	3	1.4	Denver, Colo.	21	.5	Mason, Mich.	1	.3			

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 38

Included here are manufacturers of mechanical measuring, engineering, laboratory and scientific research instruments, optical instruments and lenses and various individual precision goods tabulated below. Companies primarily engaged in manufacturing instruments for indicating, measuring and recording electrical quantities and characteristics are classified in S.I.C. 3611. Measuring and dispensing pumps are in classification 3586, electrotherapeutic, electromedical and X-ray apparatus in 3693, and photographic flash, flood, enlarger and projection lamps in 3641. A 52% gain in the dental equipment and supplies industry was the highest among these 10 four-digit industries, but mechanical measuring instruments with a 41% rise in the value of products shipped and ophthalmic goods with a 40% increase during the same 2-year period also stood out.

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales Value Products Shipped ($ million) 1954 Census	Gross Sales Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
3811	Scientific instruments	370	581	604	45.3	61.9
3821	Mech. measuring instruments	814	804	1,137	69.4	73.1
3831	Optical instruments	205	118	138	12.7	11.7
384	*Medical equip. and supplies*					
3841	Surgical and medical instruments	208	63	77	6.6	6.4
3842	Surgical appliances and supplies	652	338	463	24.5	26.9
3843	Dental equipment and supplies	197	79	120	7.1	8.5
3851	Ophthalmic goods	238	158	221	18.5	21.0
3861	Photographic equipment	449	867	1,179	59.1	59.9
387	*Watches and clocks*					
3871	Watches and clocks	145	330	389	25.7	20.8
3872	Watchcases	64	35	41	3.8	3.4

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 38

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957	COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
3811—Scientific Instruments			Essex, N. J.	10	3.5	Westchester, N. Y.	4	1.1	Nassau, N. Y.	8	.8	3821—Mechanical Measuring Instruments		
Bergen, N. J.	8	9.9	Los Angeles, Cal.	48	3.4	Suffolk, Mass.	4	1.1						
Hennepin, Minn.	3	7.0	Cook, Ill.	28	2.7	Durham, N. C.	1	1.0	Total Above Counties	188	53.2	Philadelphia, Pa.	24	7.3
Queens, N. Y.	8	4.3	Scott, Iowa	1	2.4	Baltimore, Md.	2	1.0				Hennepin, Minn.	3	6.2
Milwaukee, Wis.	1	3.9	Passaic, N. J.	1	2.1	Philadelphia, Pa.	11	.8				Los Angeles, Cal.	49	5.6
Kent, Mich.	1	3.5	Lackawanna, Pa.	1	1.8	New York, N. Y.	12	.7	Industry Total	370	61.9			
			Middlesex, Mass.	11	1.8	Harris, Tex.	12	.6						
									% of U. S.	50.3	85.9			

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SM S I C Instruments & Related Products—S.I.C. 38 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 38 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Cook, Ill.	46	5.1
Monroe, N. Y.	7	3.0
Fairfield, Conn.	13	2.9
Norfolk, Mass.	8	2.5
Milwaukee, Wis.	7	2.2
Washtenaw, Mich.	6	2.0
Queens, N. Y.	24	1.9
Knox, Tenn.	2	1.8
Cuyahoga, Ohio	17	1.8
Bucks, Pa.	1	1.8
St. Louis City, Mo.	5	1.6
New Haven, Conn.	9	1.4
Bristol, Mass.	2	1.3
Providence, R. I.	2	1.3
Winnebago, Ill.	1	1.3
Westmoreland, Pa.	1	1.3
Franklin, Ohio	6	1.2
Total Above Counties	233	53.5
Industry Total	614	73.1
% of U. S.	37.9	73.0

3831—Optical Instruments and Lenses

Monroe, N. Y.	12	4.9
Erie, N. Y.	1	1.2
Cook, Ill.	16	.9
Bronx, N. Y.	4	.6
Orange, Cal.	1	.6
Los Angeles, Cal.	28	.5
Fairfield, Conn.	3	.3
Hampshire, Mass.	1	.3
Middlesex, Mass.	8	.3
Nassau, N. Y.	7	.3
Cabell, W. Va.	2	.2
Cheshire, N. H.	1	.2
El Paso, Tex.	1	.2
Hamilton, Ohio	2	.2
New York, N. Y.	14	.1
Allegheny, Pa.	2	.1
Westchester, N. Y.	6	.1
Suffolk, Mass.	5	.1
Total Above Counties	114	11.1
Industry Total	206	11.7
% of U. S.	55.6	94.9

3841—Surgical and Medical Instruments

Bergen, N. J.	6	1.8
Fairfield, Conn.	8	.5
Queens, N. Y.	10	.4
Davidson, Tenn.	1	.4
New York, N. Y.	13	.2
Erie, N. Y.	3	.2
Cook, Ill.	15	.2
Norfolk, Mass.	4	.2
Kosciusko, Ind.	1	.2
Platte, Neb.	1	.2
New Haven, Conn.	2	.2
Philadelphia, Pa.	7	.2
Onondaga, N. Y.	2	.2
Los Angeles, Cal.	16	.2
Suffolk, Mass.	7	.1
Kings, N. Y.	11	.1
Total Above Counties	107	5.3
Industry Total	208	6.4
% of U. S.	51.4	82.8

3842—Surgical Appliances and Supplies

Cook, Ill.	50	4.2
Middlesex, N. J.	3	3.7
Allegheny, Pa.	7	1.2
Fairfield, Conn.	5	1.1
Erie, Pa.	3	.8
New York, N. Y.	50	.8
Dane, Wis.	3	.7
New Haven, Conn.	2	.7
Niagara, N. Y.	1	.7
Los Angeles, Cal.	41	.7
Philadelphia, Pa.	21	.6
Cuyahoga, Ohio	14	.5
Kings, N. Y.	13	.4
Winnebago, Ill.	2	.4
Jackson, Mich.	2	.4
Highland, Ohio	1	.4
Hampden, Mass.	1	.4
Queens, N. Y.	9	.4
Monroe, N. Y.	4	.4
Hamilton, Ohio	7	.3
Total Above Counties	239	18.8
Industry Total	652	20.9
% of U. S.	36.7	89.9

3843—Dental Equipment and Supplies

Monroe, N. Y.	2	1.2
Philadelphia, Pa.	20	1.0
Cook, Ill.	23	.9
Richmond, N. Y.	1	.8
York, Pa.	1	.8
New York, N. Y.	21	.6
Sussex, Del.	1	.4
Stark, Ohio	1	.4
Wayne, Mich.	4	.3
Middlesex, Mass.	3	.2
Alleghany, Va.	1	.2
Franklin, Ohio	1	.2
Erie, N. Y.	3	.1
Denver, Col.	6	.1
Los Angeles, Cal.	13	.1
Total Above Counties	101	7.3
Industry Total	197	8.5
% of U. S.	51.3	85.9

3851—Ophthalmic Goods

Monroe, N. Y.	8	6.9
Worcester, Mass.	4	3.8
New York, N. Y.	54	1.4
Providence, R. I.	14	1.1
Petersburg City, Va.	2	1.1
Queens, N. Y.	12	.8
Berks, Pa.	2	.8
Kings, N. Y.	11	.7
Essex, N. J.	9	.5
Jackson, Mo.	3	.4
Suffolk, Mass.	4	.2
Bristol, Mass.	3	.2
Cook, Ill.	11	.2
Bergen, N. J.	4	.2
Dade, Fla.	4	.2
Harris, Tex.	1	.2
Marion, Ind.	3	.2
Ontario, N. Y.	1	.2
Cuyahoga, Ohio	4	.2

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The end result of most industrial production is the sale of products or services to consumers. For up-to-date basic data on consumers—in city, county, metropolitan area, state, regional and national markets—see SALES MANAGEMENT May 10 *Survey of Buying Power.*

Manufacture of Instruments & Related Products—S.I.C. 38 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 38 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Nassau, N. Y.	3	.1
Total Above Counties	157	19.4
Industry Total	238	21.0
% of U. S.	66.0	92.4
3861—Photographic Equipment and Supplies		
Monroe, N. Y.	15	29.6
Cook, Ill.	74	7.9
Broome, N. Y.	5	4.1
Nassau, N. Y.	7	2.0
Middlesex, N. J.	1	1.7
Los Angeles, Cal.	70	1.4
Queens, N. Y.	20	1.3
Washtenaw, Mich.	2	1.1
Middlesex, Mass.	1	1.1
Kings, N. Y.	13	1.0
Essex, N. J.	7	.9
Suffolk, Mass.	5	.7
New York, N. Y.	48	.7
Hudson, N. J.	2	.7
Denver, Col.	5	.5
Wayne, Mich.	11	.5
Milwaukee, Wis.	6	.4
Hennepin, Minn.	3	.4
Bergen, N. J.	8	.3
Westchester, N. Y.	5	.3
Total Above Counties	308	56.6
Industry Total	449	59.9
% of U. S.	68.8	94.5
3871—Watches and Clocks		
La Salle, Ill.	1	3.2
Hartford, Conn.	4	2.6
Kane, Ill.	2	2.4
Lancaster, Pa.	2	2.1
New Haven, Conn.	5	1.7
New York, N. Y.	52	1.2
Litchfield, Conn.	3	1.1
Middlesex, Mass.	6	1.1
Queens, N. Y.	4	1.1
Cook, Ill.	12	.8
Worcester, Mass.	1	.6
Walworth, Wis.	1	.6
Taylor, Tex.	1	.3
Kings, N. Y.	8	.3
Hamilton, Ohio	1	.3
Bureau, Ill.	1	.3
Hampden, Mass.	1	.3
Essex, N. J.	3	.2
Hudson, N. J.	1	.2
Suffolk, Mass.	1	.2
Total Above Counties	110	20.6
Industry Total	145	20.8
% of U. S.	75.9	99.0
3872—Watchcases		
New York, N. Y.	37	.7
Campbell, Ky.	1	.7
Queens, N. Y.	7	.4
New Haven, Conn.	3	.4
Mason, Mich.	1	.4
Burlington, N. J.	1	.2
Suffolk, N. Y.	1	.2
Fairfield, Conn.	2	.1
Kings, N. Y.	4	.1
Total Above Counties	57	3.2
Industry Total	64	3.4
% of U. S.	89.1	94.1

Miscellaneous Manufactures—S.I.C. 39

SM Estimates for 100 Counties with 99.9% of 1957 Equipment

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Los Angeles, Cal.	965	51.2
New York, N. Y.	3459	47.8
Cook, Ill.	907	32.0
Providence, R. I.	780	27.2
New Haven, Conn.	119	22.0
Kings, N. Y.	785	20.3
Queens, N. Y.	304	18.0
Essex, N. J.	305	14.8
St. Louis, Mo.	22	13.7
Bristol, Mass.	154	12.0
Hamilton, Ohio	136	11.0
Philadelphia, Pa.	348	8.3
Worcester, Mass.	129	7.3
Cuyahoga, Ohio	195	6.9
Hudson, N. J.	139	6.8
Fairfield, Conn.	113	6.6
Hampden, Mass.	54	5.8
Monroe, N. Y.	74	5.6
Bronx, N. Y.	238	5.2
Wayne, Mich.	211	5.2
Milwaukee, Wisc.	119	4.8
Allegheny, Pa.	100	4.7
Hartford, Conn.	58	4.2
Suffolk, Mass.	148	4.1
Erie, N. Y.	85	3.9
Oneida, N. Y.	17	3.7
Westchester, N. Y.	115	3.4
Nassau, N. Y.	115	3.4
Middlesex, Mass.	88	3.2
Baltimore, Md.	8	3.2
Union, N. J.	88	3.1
Litchfield, Conn.	17	3.0
Montgomery, Pa.	46	2.9
Erie, Pa.	29	2.8
Crawford, Pa.	7	2.5
Fulton, Ga.	50	2.4
Bergen, N. J.	92	2.3
York, Pa.	17	2.3
Passaic, N. J.	81	2.2
Hennepin, Minn.	118	2.1
Kalamazoo, Mich.	18	2.1
Webster, La.	1	2.1
Lackawanna, Pa.	29	2.1
Essex, Mass.	45	2.1
Hampshire, Mass.	11	2.0
New Castle, Del.	16	1.9
Elkhart, Ind.	28	1.9
Genesee, Mich.	14	1.9
Broome, N. Y.	13	1.9
Lucas, Ohio	46	1.8
Lake, Ind.	18	1.8
Mercer, N. J.	25	1.8
Bowie, Tex.	4	1.7
Summit, Ohio	49	1.7
Kane, Ill.	33	1.6
Montgomery, Ohio	48	1.6
Middlesex, Conn.	18	1.6
Harris, Tex.	63	1.6
Indiana, Pa.	3	1.5
Onondaga, N. Y.	26	1.5
San Francisco, Cal.	135	1.5
Multnomah, Ore.	78	1.5
Denver, Colo.	78	1.5
Jefferson, Ky.	29	1.5
Madison, Ill.	9	1.5
Winnebago, Ill.	22	1.5
Chittenden, Vt.	4	1.5
Dallas, Tex.	62	1.4
Middlesex, N. J.	26	1.4
Labette, Kan.	1	1.4
Bernalillo, N. M.	14	1.4
Morris, N. J.	25	1.4
Franklin, Ohio	48	1.4
Berkshire, Mass.	9	1.3
Camden, N. J.	30	1.3
Orange, Cal.	40	1.3
Lancaster, Pa.	24	1.3
Luzerne, Pa.	23	1.3
Berks, Pa.	26	1.3
Rock, Wisc.	3	1.3
Jackson, Mo.	79	1.2
Kent, Mich.	38	1.2
Saunders, Nebr.	1	1.2
Tarrant, Tex.	37	1.2
Albany, N. Y.	18	1.1
Marion, Ind.	49	1.1
Macon, Ill.	16	1.1
Racine, Wisc.	16	1.1
Northampton, Pa.	14	1.1
Muskegon, Mich.	8	1.0
Calhoun, Ark.	1	1.0
Grayson, Tex.	4	1.0
Ouachita, Ark.	1	1.0
St. Joseph, Ind.	18	1.0
Portage, Ohio	1	1.0
Hillsborough, N. H.	17	1.0
Ramsey, Minn.	41	.9
Lee, Iowa	4	.9
Muscatine, Iowa	16	.9
Alameda, Cal.	59	.9
Total Above Counties	1247.6	477.0
% of U.S.A. Total	73.3	99.9

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SM Estimates, 1957, for 4-Digit Industries of S.I.C. 39

These 38 four-digit industries include establishments primarily engaged in manufacturing products not classified in any other major group. As might be expected in such an assortment of classifications, gains varied widely, from 1% for tobacco pipes and cigarette holders to 59% for organs, which have been finding favor in American homes for some years. Children's vehicles (3943) does not include bicycles, which are in 3751. Plants primarily engaged in making athletic apparel are in S.I.C. 23. Drafting instruments are in industry 3811, not in 3952. Industry 3962 (feathers, plumes and artificial flowers) does not include such products made of glass, which are in 3231. Industry 3993 (signs and advertising displays) does not include manufacturers of electric signal equipment, which is classified in 3662. Lighting fixtures appear in industry 3642.

SM SIC Miscellaneous Manufactures—S.I.C. 39 (Cont'd)

SM Estimates, 1957, for 4-Digit Industries of S.I.C. 39

S. I. C. Code Number	INDUSTRY	No. of Plants	Gross Sales: Value Products Shipped ($ million) 1954 Census	Gross Sales: Value Products Shipped ($ million) SM Est. 1957	Employment (thous.) 1954 Census	Employment (thous.) SM Est. 1957
391	*Jewelry and silverware*					
3911	Jewelry (precious metal)	1,327	256	294	23.5	21.9
3912	Jewelers' findings	234	69	89	5.4	5.6
3913	Lapidary work	333	34	40	1.8	1.8
3914	Silverware and plated ware	207	211	224	17.3	15.2
393	*Musical instruments and parts*					
3931	Pianos	27	65	93	5.8	6.8
3932	Organs	31	29	46	1.8	2.3
3933	Piano and organ parts	40	35	51	3.0	3.1
3939	Musical instruments, n. e. c.	144	40	48	4.9	4.8
394	*Toys and sporting goods*					
3941	Games and toys, n. e. c.	886	383	467	38.2	35.6
3942	Dolls	484	143	210	15.1	19.0
3943	Children's vehicles	60	77	96	6.3	6.8
3949	Sporting and athletic goods	1,031	294	423	28.9	30.6
395	*Office supplies*					
3951	Pens and mechanical pencils	140	129	175	10.9	12.6
3952	Lead pencils and crayons	60	55	63	5.0	4.5
3953	Hand stamps and stencils	453	48	58	5.7	5.8
3954	Artists' materials	95	24	28	1.9	1.8
3955	Carbon paper and inked ribbons	84	81	104	4.7	5.3
396	*Costume jewelry and notions*					
3961	Costume jewelry	1,127	239	263	27.7	24.6
3962	Artificial flowers	471	50	54	7.3	6.1
3963	Buttons	409	65	66	6.5	6.4
3964	Needles, pins, and fasteners	357	203	276	23.2	24.1
3971	Plastics products, n. e. c.	2,439	1,193	1,682	92.0	97.0
398	*Miscellaneous manufactures*					
3981	Brooms and brushes	698	185	198	16.8	16.9
3982	Cork products	35	40	42	2.1	1.7
3983	Matches	20	61	66	6.2	5.8
3984	Candles	89	29	32	3.0	2.7
3985	Fireworks and pyrotechnics	78	22	24	2.6	2.3
3986	Jewelry and instrument cases	166	65	77	8.0	8.4
3987	Lamp shades	325	39	43	5.0	4.8
3988	Morticians' goods	563	166	209	16.7	18.2
3991	Beauty and barber shop equip.	67	21	30	1.7	1.9
3992	Furs, dressed and dyed	160	29	40	3.5	4.6
3993	Signs and advertising displays	2,820	353	494	33.6	38.3
3994	Hairwork	131	14	17	1.7	2.0
3995	Umbrellas, parasols and canes	140	32	37	3.2	3.6
3996	Tobacco, pipes and cigarette holders	43	11	11	1.5	1.5
3997	Soda fountain and bar equipment	50	20	21	1.4	1.3
3999	Miscellaneous products, n. e. c.	893	235	273	20.8	20.9

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 39 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
3911—Jewelry		
New York, N. Y.	633	6.2
Providence, R. I.	130	4.7
Bristol, Mass.	41	2.3
Essex, N. J.	65	1.6
Hudson, N. J.	4	.6
Monroe, N. Y.	3	.6
Cook, Ill.	47	.5
Los Angeles, Cal.	60	.5
Union, N. J.	4	.4
Marion, Ind.	8	.4
Steele, Minn.	1	.3
Hamilton, Ohio	26	.3
Queens, N. Y.	9	.3
Wayne, Mich.	14	.3
Philadelphia, Pa.	34	.3
Erie, N. Y.	13	.2
Kings, N. Y.	8	.2
Bernalillo, N. M.	3	.2
San Francisco, Cal.	21	.2
Harris, Tex.	4	.2
Total Above Counties	1,128	20.3
Industry Total	1,327	21.9
% of U. S.	85.0	92.7
3912—Jewelers' Findings		
Providence, R. I.	138	2.9
Bristol, Mass.	19	1.4
New York, N. Y.	34	.5
Essex ,N. J.	16	.3
Westchester, N. Y.	1	.2
Total Above Counties	206	5.3
Industry Total	234	5.6
% of U. S.	88.0	94.6
3913—Lapidary Work		
New York, N. Y.	223	1.1
Providence, R. I.	13	.1
Middlesex, N. J.	1	.1
Total Above Counties	237	1.3
Industry Total	333	1.8
% of U. S.	71.2	72.2
3914—Silverware and Plated Ware		
New Haven, Conn.	20	4.1
Oneida, N. Y.	1	3.0
Bristol, Mass.	22	1.7
Providence, R. I.	6	1.1
New York, N. Y.	42	.7
Cook, Ill.	10	.7
Essex, Mass.	2	.6
Kings, N. Y.	21	.6
Essex, N. J.	13	.6
Delaware, Ind.	1	.3
Queens, N. Y.	5	.3
Los Angeles, Cal.	10	.2
Baltimore City, Md.	4	.2
Guernsey, Ohio	1	.2
Norfolk, Va.	1	.2
Howard, Ind.	1	.2
Franklin, Mass.	1	.2
Orange, N. Y.	1	.2
Total Above Counties	162	15.1
Industry Total	207	15.2
% of U. S.	78.3	99.3
3931—Pianos		
Hamilton, Ohio	1	1.7
Cook, Ill.	3	1.0
De Kalb, Ill.	1	.8
Bronx, N. Y.	4	.6
Queens, N. Y.	2	.5
Monroe, N. Y.	1	.5
Delaware, Pa.	1	.5
Van Buren, Mich.	1	.5
New York, N. Y.	4	.4
Ottawa, Mich.	2	.2
Total Above Counties	20	6.7
Industry Total	27	6.8
% of U. S.	74.1	98.5
3932—Organs		
Washington, Md.	1	.5
Cook, Ill.	4	.3
Windham, Vt.	1	.3
Elkhart, Ind.	1	.3
Suffolk, Mass.	1	.2
Madison, Ill.	1	.2
Lehigh, Pa.	1	.2
Total Above Counties	10	2.0
Industry Total	31	2.3
% of U. S.	32.3	87.0
3933—Piano and Organ Parts		
Cook, Ill.	5	.8
Middlesex, Conn.	1	.6
Winnebago, Ill.	1	.4
Clark, Ohio	2	.2
Grays Harbor, Wash.	1	.2
Erie, N. Y.	1	.2
Racine, Wis.	1	.2
Shelby, Tenn.	2	.2
Total Above Counties	14	2.8
Industry Total	40	3.1
% of U. S.	35.0	90.3
3939—Musical Instruments, N.E.C.		
Elkhart, Ind.	17	1.4
Cook, Ill.	25	.7
Cuyahoga, Ohio	4	.4
Walworth, Wis.	2	.2
Orange, Cal.	2	.2
New York, N. Y.	17	.2
Windham, Vt.	1	.2
Butler, Ohio	1	.2
Kalamazoo, Mich.	2	.2
Suffolk, Mass.	8	.1
Los Angeles, Cal.	9	.1
Total Above Counties	88	3.9
Industry Total	144	4.8
% of U. S.	61.1	81.3
3941—Games and Toys, N.E.C.		
Essex, N. J.	16	2.7
Kings, N. Y.	87	2.6
New Haven, Conn.	7	1.7
New York, N. Y.	97	1.6
Los Angeles, Cal.	71	1.6
Cook, Ill.	51	1.4
Erie, Pa.	4	1.3
Queens, N. Y.	22	1.2
Worcester, Mass.	15	1.2
Bronx, N. Y.	23	.9

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SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 39 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
Hampden, Mass.	6	.9
Lancaster, Pa.	4	.7
Providence, R. I.	8	.7
Hillsborough, N. H.	2	.6
Wayne, Mich.	13	.6
Marshall, W. Va.	1	.6
St. Louis City, Mo.	11	.5
Westchester, N. Y.	14	.5
Allegheny, Pa.	4	.5
Montgomery, Pa.	7	.5
Total Above Counties	463	22.3
Industry Total	886	35.6
% of U. S.	52.3	62.6

3942—Dolls

New York, N. Y.	193	5.9
Kings, N. Y.	102	4.0
Queens, N. Y.	22	2.5
Mercer, N. J.	2	.5
Passaic, N. J.	3	.5
Hudson, N. J.	4	.5
Fulton, Ga.	1	.5
Westchester, N. Y.	4	.4
Bronx, N. Y.	20	.4
Philadelphia, Pa.	7	.3
Hampden, Mass.	2	.3
Northampton, Pa.	1	.3
Worcester, Mass.	6	.3
Middlesex, Mass.	2	.3
Nassau, N. Y.	4	.3
Los Angeles, Cal.	14	.3
San Francisco, Cal.	3	.3
Total Above Counties	390	17.6
Industry Total	464	19.0
% of U. S.	80.6	92.6

3943—Children's Vehicles

Worcester, Mass.	11	1.2
Cuyahoga, Ohio	1	1.1
Lake, Ind.	1	.8
Cook, Ill.	2	.6
St. Louis City, Mo.	2	.4
Sheboygan, Wis.	1	.4
Los Angeles, Cal.	6	.4
Hamilton, Ohio	1	.4
Kings, N. Y.	3	.2
Bronx, N. Y.	7	.2
Noble, Ind.	1	.2
Broome, N. Y.	1	.2
Philadelphia, Pa.	1	.2
La Porte, Ind.	1	.2
Houston, Ala.	1	.2
Total Above Counties	40	6.7
Industry Total	60	6.8
% of U. S.	66	98.5

3949—Sporting and Athletic Goods

Cook, Ill.	53	1.8
Hamilton, Ohio	11	1.8
Hampden, Mass.	4	1.6
Los Angeles, Cal.	83	1.2
St. Louis City, Mo.	11	1.1
Philadelphia, Pa.	15	1.0
Muskegon, Mich.	3	1.0
Litchfield, Conn.	3	.7
Denver, Col.	12	.6
Essex, N. J.	8	.6
Summit, Ohio	9	.5
Coffee, Tenn.	4	.4
Bristol, Mass.	2	.4
Lawrence, Ohio	1	.4
Ashland, Ohio	1	.4
Ashtabula, Ohio	1	.4
Cass, Mich.	2	.4
Jefferson, Ky.	1	.4
Kalamazoo, Mich.	2	.4
Sanilac, Mich.	2	.4
Total Above Counties	228	15.3
Industry Total	1,031	30.6
% of U. S.	22.1	50.0

3951—Pens and Mechanical Pencils

Rock, Wis.	1	1.7
Lee, Iowa	2	1.2
New York, N. Y.	35	1.1
Cook, Ill.	6	1.1
Hudson, N. J.	7	1.0
Los Angeles, Cal.	17	1.0
Fulton, Ga.	1	.8
Camden, N. J.	2	.8
Dunn, Wis.	1	.5
St. Louis, Mo.	1	.5
Bergen, N. J.	4	.4
St. Louis City, Mo.	5	.2
Fairfield, Conn.	1	.2
Henry, Iowa	1	.2
Charlotte City, Va.	1	.2
Providence, R. I.	9	.2
New Haven, Conn.	2	.2
Nassau, N. Y.	2	.2
Kings, N. Y.	5	.1
Total Above Counties	103	11.6
Industry Total	140	12.6
% of U. S.	73.6	92.1

3952—Lead Pencils and Crayons

New York, N. Y.	5	.6
Hudson, N. J.	3	.6
Bedford, Tenn.	7	.5
Kings, N. Y.	5	.4
Marshall, Tenn.	2	.4
Erie, Ohio	1	.4
Northampton, Pa.	2	.4
Fulton, Ga.	1	.2
Scott, Ky.	1	.2
Luzerne, Pa.	1	.2
Total Above Counties	28	3.9
Industry Total	60	4.5
% of U. S.	46.7	86.7

3953—Hand Stamps and Stencils

Cook, Ill.	38	.9
Allegheny, Pa.	9	.4
New York, N. Y.	40	.3
Philadelphia, Pa.	14	.3
Los Angeles, Cal.	23	.3
Westchester, N. Y.	2	.2
Middlesex, Conn.	1	.2
Rockland, N. Y.	1	.2
Wayne, Mich.	10	.1
Cuyahoga, Ohio	9	.1
San Francisco, Cal.	10	.1
Total Above Counties	157	3.1
Industry Total	453	5.8
% of U. S.	34.7	53.4

3954—Artists' Materials

Essex, N. J.	3	.3
Kings, N. Y.	10	.3
New York, N. Y.	24	.2
Cuyahoga, Ohio	2	.2
Marion, Ind.	1	.2
Philadelphia, Pa.	4	.2
Total Above Counties	44	1.4
Industry Total	95	1.8
% of U. S.	46.3	77.7

3955—Carbon Paper and Inked Ribbons

Kings, N. Y.	7	.7
Monroe, N. Y.	7	.5
Bergen, N. J.	1	.5
Nassau, N. Y.	2	.5
Cook, Ill.	8	.4
New York, N. Y.	9	.2
Fairfield, Conn.	2	.2
Allegheny, Pa.	1	.2
Cuyahoga, Ohio	3	.2
Polk, Iowa	1	.2
Ellis, Tex.	3	.2
Essex, N. J.	2	.2
St. Clair, Mich.	1	.2
Kane, Ill.	1	.2
Burlington, N. J.	1	.2
Hartford, Conn.	1	.2
Middlesex, Mass.	1	.2
Los Angeles, Cal.	6	.2
Denver, Col.	2	.1
Total Above Counties	59	5.3
Industry Total	84	5.3
% of U. S.	70.2	100.0

3961—Costume Jewelry

Providence, R. I.	364	10.0
New York, N. Y.	425	6.4
Bristol, Mass.	32	2.8
Queens, N. Y.	28	1.5
Kings, N. Y.	58	1.1
Los Angeles, Cal.	29	.4
Cook, Ill.	18	.4
Westchester, N. Y.	9	.3
New Haven, Conn.	5	.2
Bronx, N. Y.	21	.2
Middlesex, N. J.	2	.2
Essex, N. J.	12	.2
Hudson, N. J.	8	.2
Total Above Counties	1,011	23.9
Industry Total	1,127	24.6
% of U. S.	89.7	97.2

3962—Artificial Flowers

New York, N. Y.	210	2.5
Providence, R. I.	5	.4
Kings, N. Y.	44	.3
Cook, Ill.	22	.3
Philadelphia, Pa.	10	.3
Bronx, N. Y.	18	.2
Bradford, Pa.	3	.2
La Porte, Ind.	1	.2
Brown, Tex.	1	.2
Westchester, N. Y.	4	.1
Hudson, N. J.	8	.1
Richmond, N. Y.	3	.1
Total Above Counties	329	5.5
Industry Total	471	6.1
% of U. S.	69.9	90.2

3963—Buttons

New York, N. Y.	226	2.2
Muscatine, Iowa	10	.7
Cook, Ill.	14	.3
Monroe, N. Y.	3	.3
Hudson, N. J.	13	.2
Queens, N. Y.	11	.2
Tolland, Conn.	3	.1
Caroline, Md.	3	.1
Knox, Tenn.	1	.1
Washington, Iowa	1	.1
Windham, Conn.	1	.1
Allamakee, Iowa	1	.1
Hardin, Tenn.	1	.1
Bergen, N. J.	8	.1
Nassau, N. Y.	3	.1
Philadelphia, Pa.	3	.1
Sussex, Del.	13	.1
Kings, N. Y.	8	.1
Essex, N. J.	5	.1
Total Above Counties	326	5.2
Industry Total	409	6.4
% of U. S.	79.7	84.9

3964—Needles, Pins and Fasteners

New Haven, Conn.	19	5.2
New York, N. Y.	176	3.0
Crawford, Pa.	1	2.8
Litchfield, Conn.	3	2.0
Queens, N. Y.	12	1.5
Essex, N. J.	8	1.4
Hartford, Conn.	4	1.2
Providence, R. I.	7	.7
Cook, Ill.	9	.5
Kings, N. Y.	26	.4
Warwick, Va.	1	.4
Douglas, Neb.	1	.4
Nassau, N. Y.	5	.4
Bristol, R. I.	1	.4
Fairfield, Conn.	4	.3
Shelby, Ill.	1	.2
Outagamie, Wis.	1	.2
Middlesex, N. J.	2	.2
Bristol, Mass.	2	.2
Windham, Conn.	2	.2
Total Above Counties	285	21.6
Industry Total	357	24.1
% of U. S.	79.8	89.6

3971—Plastics Products, N.E.C.

Cook, Ill.	200	10.7
Los Angeles, Cal.	236	5.4
Worcester, Mass.	58	4.6
New York, N. Y.	179	2.7
Kings, N. Y.	101	2.3
Montgomery, Pa.	11	2.3
Lackawanna, Pa.	8	1.9
Queens, N. Y.	58	1.7
Middlesex, Mass.	26	1.7
Essex, N. J.	52	1.5
Providence, R. I.	29	1.5
Hampshire, Mass.	5	1.5
Nassau, N. Y.	28	1.4
Fairfield, Conn.	33	1.4
Erie, N. Y.	16	1.4
Hamilton, Ohio	17	1.4
New Haven, Conn.	19	1.2
Union, N. J.	33	1.2
New Castle, Del.	7	1.2
Bronx, N. Y.	36	1.1
Total Above Counties	1,152	48.1
Industry Total	2,439	97.0
% of U. S.	47.2	49.6

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Industries of Tomorrow (82% to 99% UNSOLD)—See Page 80.

SIC Miscellaneous Manufactures—S.I.C. 39 (Cont'd)

SM Estimates for 4-Digit Employment, Leading Counties, S.I.C. 39 (Continued)

COUNTY and STATE	No. of Plants	SM Employment (thou.) 1957
3991—Brooms and Brushes		
New York, N. Y.	46	1.5
Baltimore City, Md.	10	.9
Cuyahoga, Ohio	18	.7
Essex, N. J.	12	.7
Hartford, Conn.	6	.7
Cook, Ill.	29	.6
Lucas, Ohio	2	.4
Suffolk, Mass.	5	.4
Kings, N. Y.	24	.4
Hampshire, Mass.	1	.4
Westchester, N. Y.	4	.4
Philadelphia, Pa.	19	.4
Frederick, Md.	2	.4
Los Angeles, Cal.	23	.4
St. Louis City, Mo.	6	.3
Milwaukee, Wis.	8	.3
Kane, Ill.	3	.3
Hampden, Mass.	5	.2
Wayne, Ohio	1	.2
Edgar, Ill.	1	.2
Total Above Counties	225	9.8
Industry Total	686	16.9
% of U. S.	32.2	58.0
3992—Cork Products		
Allegheny, Pa.	1	.5
Beaver, Pa.	1	.3
Union, N. J.	1	.3
Kings, N. Y.	7	.2
Hudson, N. J.	3	.1
Monmouth, N. J.	1	.1
Lancaster, Pa.	1	.1
Total Above Counties	15	1.6
Industry Total	35	1.7
% of U. S.	42.9	94.1
3993—Matches		
Hampden, Mass.	1	.8
Cook, Ill.	2	.8
Carlton, Minn.	1	.8
Queens, N. Y.	1	.8
Columbia, N. Y.	1	.4
Winnebago, Wis.	1	.4
St. Louis City, Mo.	2	.4
Summit, Ohio	1	.4
Cheshire, N. H.	1	.2
Jefferson, La.	1	.2
Pierce, Wash.	1	.2
Butte, Cal.	1	.2
Total Above Counties	14	5.6
Industry Total	20	5.8
% of U. S.	70.0	96.6
3994—Candles		
Onondaga, N. Y.	5	.8
Erie, N. Y.	2	.3
Queens, N. Y.	6	.3
Winnebago, Wis.	2	.2
Medina, Pa.	1	.2
Kings, N. Y.	10	.1
Philadelphia, Pa.	1	.1
Los Angeles, Cal.	13	.1
Total Above Counties	40	2.1
Industry Total	89	2.7
% of U. S.	44.9	77.8
3995—Fireworks and Pyrotechnics		
Cecil, Md.	8	.6
Los Angeles, Cal.	6	.4
Montgomery, Ohio	1	.2
New Haven, Conn.	1	.2
Cumberland, N. J.	2	.1
Tarrant, Tex.	4	.1
Total Above Counties	22	1.6
Industry Total	78	2.3
% of U. S.	28.2	69.6
3996—Jewelry and Instruments		
Suffolk, Mass.	6	1.5
Queens, N. Y.	8	.9
Fairfield, Conn.	4	.8
Kane, Ill.	1	.8
Providence, R. I.	15	.6
New York, N. Y.	44	.6
Hudson, N. J.	6	.4
Erie, N. Y.	4	.2
Cook, Ill.	10	.2
Bristol, Mass.	3	.2
Kings, N. Y.	13	.2
Orange, N. Y.	1	.2
Union, N. J.	1	.2
Rapides, La.	1	.2
New Haven, Conn.	2	.2
Fulton, Ohio	1	.2
Cortland, N. Y.	1	.2
Philadelphia, Pa.	5	.1
Essex, N. J.	2	.1
Total Above Counties	128	7.8
Industry Total	166	8.4
% of U. S.	77.1	92.9
3997—Lamp Shades		
Cook, Ill.	37	1.0
New York, N. Y.	106	.9
Philadelphia, Pa.	38	.7
Kings, N. Y.	24	.3
Los Angeles, Cal.	24	.3
Passaic, N. J.	7	.2
Bronx, N. Y.	8	.2
Bergen, N. J.	2	.2
Middlesex, Conn.	1	.2
Westchester, N. Y.	1	.2
Lackawanna, Pa.	3	.1
Total Above Counties	251	4.3
Industry Total	325	4.8
% of U. S.	77.2	89.6
3998—Morticians' Goods		
Cook, Ill.	38	1.4
Ripley, Ind.	1	.8
Berks, Pa.	1	.8
Fulton, Ga.	6	.6
Los Angeles, Cal.	21	.5
Clark, Ohio	3	.5
Wayne, Ind.	14	.5
Franklin, Ohio	7	.4
Allegheny, Pa.	3	.4
York, Pa.	1	.4
Hamilton, Ohio	4	.4
Philadelphia, Pa.	12	.3
St. Louis City, Mo.	10	.3
Lackawanna, Pa.	4	.3
Queens, N. Y.	7	.3
Cuyahoga, Ohio	10	.3
Middlesex, Mass.	2	.2
Wayne, Mich.	12	.2
Dearborn, Ind.	1	.2
Fayette, Ind.	2	.2
Total Above Counties	180	9.0
Industry Total	363	18.2
% of U. S.	28.2	49.5
3999—Beauty and Barber-shop Equipment		
St. Louis City, Mo.	3	.4
Racine, Wis.	2	.3
Cook, Ill.	10	.2
Lycoming, Pa.	1	.2
Kings, N. Y.	6	.2
Whiteside, Ill.	1	.1
Los Angeles, Cal.	10	.1
Total Above Counties	33	1.5
Industry Total	67	1.9
% of U. S.	49.3	78.9
4000—Furs, Dressed and Dyed		
New York, N. Y.	87	1.2
Kings, N. Y.	18	1.2
Hudson, N. J.	4	.6
Essex, N. J.	8	.6
Bronx, N. Y.	4	.2
St. Louis City, Mo.	1	.2
Orange, N. Y.	1	.2
Westchester, N. Y.	2	.1
Total Above Counties	123	4.3
Industry Total	160	4.6
% of U. S.	76.9	93.5
4001—Signs and Advertising Displays		
Cook, Ill.	154	3.9
New York, N. Y.	212	3.0
Los Angeles, Cal.	125	2.1
Kings, N. Y.	57	1.1
Queens, N. Y.	40	1.0
Hamilton, Ohio	28	.9
Philadelphia, Pa.	61	.9
Milwaukee, Wis.	32	.8
Wayne, Mich.	47	.8
Cuyahoga, Ohio	47	.8
Dallas, Tex.	21	.8
Hennepin, Minn.	34	.7
St. Louis City, Mo.	29	.7
Alameda, Cal.	16	.5
Hudson, N. J.	16	.5
Suffolk, Mass.	23	.5
Allegheny, Pa.	25	.5
Essex, N. J.	20	.4
Allen, Ohio	2	.4
Stark, Ohio	7	.4
Total Above Counties	1,003	29.7
Industry Total	2,620	38.3
% of U. S.	38.3	54.0
4004—Hairwork		
New York, N. Y.	60	1.1
Kings, N. Y.	14	.3
Philadelphia, Pa.	5	.1
Total Above Counties	79	1.5
Industry Total	131	2.0
% of U. S.	60.3	75.0
4005—Umbrellas, Parasols, and Canes		
New York, N. Y.	69	.9
Lancaster, Pa.	5	.5
Essex, N. J.	5	.5
Philadelphia, Pa.	7	.3
Baltimore City, Md.	5	.3
Kings, N. Y.	19	.2
Bronx, N. Y.	5	.2
Total Above Counties	115	2.9
Industry Total	140	3.6
% of U. S.	82.1	80.6
4006—Tobacco Pipes		
Hudson, N. J.	4	.4
Queens, N. Y.	3	.4
Kings, N. Y.	10	.2
Merrimack, N. H.	1	.2
Alleghany, N. C.	1	.1
New York, N. Y.	11	.1
Franklin, Mo.	2	.1
Total Above Counties	32	1.5
Industry Total	43	1.5
% of U. S.	74.4	100.0
4007—Soda Fountain and Bar Equipment		
Ottawa, Mich.	1	.4
Milwaukee, Wis.	2	.2
Bronx, N. Y.	5	.1
Bergen, N. J.	2	.1
Total Above Counties	10	.8
Industry Total	50	1.3
% of U. S.	20.0	61.5
4009—Miscellaneous Products, N.E.C.		
Essex, N. J.	18	3.2
New York, N. Y.	188	2.1
Los Angeles, Cal.	73	1.7
Kings, N. Y.	48	1.2
Cook, Ill.	50	1.2
Philadelphia, Pa.	21	.7
Monroe, N. Y.	10	.7
Marinette, Wis.	1	.6
Monroe, Pa.	1	.6
Bristol, Mass.	6	.5
Providence, R. I.	13	.5
Hamilton, Ohio	8	.5
McKean, Pa.	1	.4
Montgomery, Ohio	1	.4
St. Louis City, Mo.	11	.3
Middlesex, Mass.	8	.3
Wayne, Mich.	13	.3
Milwaukee, Wis.	15	.3
Branch, Mich.	1	.2
Hartford, Conn.	4	.2
Total Above Counties	492	15.9
Industry Total	891	20.9
% of U. S.	55.2	76.1

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"More Sales Through Better Plant Location"—Page 168

Total Manufacturers, Leading Counties

BOASI* Estimates, 1st Quarter, 1956, for 100 Counties with 61.9% of 1956 Employment

COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956	COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956	COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956	COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956	COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956
Cook, Ill.	1,012,921	Providence, R. I.	109,764	San Francisco, Cal.	69,252	Beaver, Pa.	50,753	Denver, Colo.	39,662
New York (5 Counties), N. Y.	1,005,742	Marion, Ind.	109,637	Nassau, N. Y.	68,937	Mahoning, Ohio	50,671	Hamilton, Tenn.	39,349
Los Angeles, Cal.	698,376	Montgomery, Ohio	104,475	Hampden, Mass.	68,995	Macomb, Mich.	48,348	Allen, Ind.	39,345
Wayne, Mich.	516,146	Lake, Ind.	104,142	Lucas, Ohio	66,287	Ramsey, Minn.	47,410	Schenectady, N. Y.	38,902
Philadelphia, Pa.	318,763	Suffolk, Mass.	102,985	Alameda, Cal.	66,179	New Castle, Del.	45,824	Madison, Ill.	38,692
Cuyahoga, Ohio	306,978	Essex, Mass.	93,541	Middlesex, N. J.	66,007	Lancaster, Pa.	45,475	Norfolk, Mass.	38,482
Allegheny, Pa.	213,583	Summit, Ohio	90,153	Jefferson, Ala.	65,057	Shelby, Tenn.	45,069	Lehigh, Pa.	37,558
Milwaukee, Wisc.	192,520	Bergen, N. J.	90,119	Stark, Ohio	63,205	St. Joseph, Ind.	44,479	Davidson, Tenn.	34,990
St. Louis City, Mo.	165,191	Harris, Tex.	89,247	Montgomery, Pa.	62,637	Camden, N. J.	44,222		
Hamilton, Ohio	150,593	Union, N. J.	88,330					Orleans, La.	34,913
				Oakland, Mich.	62,199	Multnomah, Ore.	44,064	Tulsa, Okla.	34,604
Middlesex, Mass.	148,531	Jefferson, Ky.	87,807	Onondaga, N. Y.	61,100	Delaware, Pa.	43,977	Butler, Ohio	33,689
Erie, N. Y.	148,133	Genesee, Mich.	85,151	Fulton, Ga.	60,706	York, Pa.	43,289	Lorain, Ohio	33,489
Essex, N. J.	137,866	Dallas, Tex.	83,180	Niagara, N. Y.	56,447	Winnebago, Ill.	43,124	Lackawanna, Pa.	32,965
Hudson, N. J.	137,722	Bristol, Mass.	81,907	Tarrant, Tex.	55,995	St. Louis, Mo.	42,569	Forsyth, N. C.	32,639
		King, Wash.	81,823			Westmoreland, Pa.	42,112	Santa Clara, Cal.	32,032
		Passaic, N. J.	79,510	San Diego, Cal.	55,235	Broome, N. Y.	41,305	Henrico, Va.	31,968
Hartford, Conn.	134,968	Hennepin, Minn.	78,953	Northampton, Pa.	53,400	Mercer, N. J.	41,272	Hillsborough, N. H.	31,845
Baltimore City, Md.	121,231	Wood, Wisc.	78,867	Westchester, N. Y.	53,358	Guilford, N. C.	41,095	Greenville, S. C.	31,085
New Haven, Conn.	116,454	Franklin, Ohio	78,226	Kent, Mich.	53,159	Erie, Pa.	41,012		
Fairfield, Conn.	114,783	Baltimore, Md.	70,679	Berks, Pa.	52,733			Total Above Counties	10,496,754
Worcester, Mass.	112,393					Luzerne, Pa.	40,765		
Monroe, N. Y.	111,875	Jackson, Mo.	69,513	Sedgwick, Kans.	52,077	Trumbull, Ohio	40,151	% of U. S. A. Total	61.9

Mining, Leading Counties

BOASI* Estimates, 1st Quarter, 1956, for 100 Counties with 57.3% of 1956 Employment

COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956	COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956	COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956	COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956	COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956
Harris, Tex.	18,499	Wichita, Tex.	6,392	Shoshone, Idaho	3,846	Letcher, Ky.	2,794	Carbon, Utah	2,100
Los Angeles, Cal.	16,665	Lackawanna, Pa.	5,865	Plaquemine s,La.	3,800	Natrona, Wyo.	2,768	Carbon, Pa.	2,096
St. Louis, Minn.	12,599	Allegheny, Pa.	5,742	Polk, Fla.	3,659	Jefferson, Tex.	2,745	Carter, Okla.	2,078
Tulsa, Okla.	12,376	Wyoming, W. Va.	5,488	Pinal, Ariz.	3,622	Grant, N. M.	2,736	Cochise, Ariz.	2,012
Luzerne, Pa.	12,085	Buchanan, Va.	5,483	Indiana, Pa.	3,569	Westmoreland, Pa.	2,624	Iron, Mich.	1,951
McDowell, W. Va.	11,543	Fayette, W. Va.	5,245	Wise, Va.	3,463	Franklin, Ill.	2,611	Barton, Kans.	1,950
Jefferson, Ala.	10,185	Pike, Ky.	5,136	Marquette, Mich.	3,421	McKean, Pa.	2,590	Brewster, Tex.**	1,839
Logan, W. Va.	9,805	Kanawha, W. Va.	4,926	Hopkins, Ky.	3,380	Andrews, Tex.**	2,528	Calcasieu, La.	1,925
Dallas, Tex.	9,648	Marion, W. Va.	4,700	Eddy, N. M.	3,339	Aransas**	2,517		
Cambria, Pa.	8,805							Lafayette, La.	1,913
		Tarrant, Tex.	4,697	Denver, Colo.	3,290	Bexar, Tex.	2,498	Gogebic, Mich.	1,861
Glasscock, Tex.**	8,253	Lea, N. M.	4,690	Perry, Ky.	3,289	Duval, Tex.**	2,473	Preston, W. Va.	1,805
Crane, Tex.**	8,182	Gregg**	4,681	Mingo, W. Va.	3,213	Ventura, Cal.	2,348	Fisher, Tex.**	1,783
Schuylkill, Pa.	7,821	Fayette, Pa.	4,665	Harrison, W. Va.	3,207	Pima, Ariz.	2,294	Lawrence, S. D.	1,775
Salt Lake, Utah	7,811	Sedgwick, Kans.	4,484	New York, N. Y.	2,981	Stephens, Okla.	2,224	Seminole, Okla.	1,768
Silver Bow, Mont.	7,568	Caddo, La.	4,208	Clearfield, Pa.	2,960	Tazewell, Va.	2,221	Grimes, Tex.**	1,758
Washington, Pa.	7,526	Monongalia, W. Va.	4,007	Belmont, Ohio	2,931	Mercer, W. Va.	2,205	Orange, Cal.	1,733
Kern, Cal.	7,484	Floyd, Ky.	3,972	St. Francois, Mo.	2,874	Dickenson, Va.	2,201		
Raleigh, W. Va.	7,139	Orleans, La.	3,951	Gila, Ariz.	2,848	Northumberland, Pa.	2,167	Total Above Counties	453,201
Harlan, Ky.	6,742	Nueces, Tex.	3,947	Boone, W. Va.	2,840	Itasca, Minn.	2,154		
Greene, Pa.	6,632	Cook, Ill.	3,943					% of U. S. A. Total	57.3
				Nicholas, W. Va.	2,836	Smith, Tex.	2,131		
Oklahoma, Okla.	6,571	Callahan, Tex.**	3,899	Somerset, Pa.	2,820	Austin, Tex.**	2,109		

*Bureau of Old Age and Survivor's Insurance

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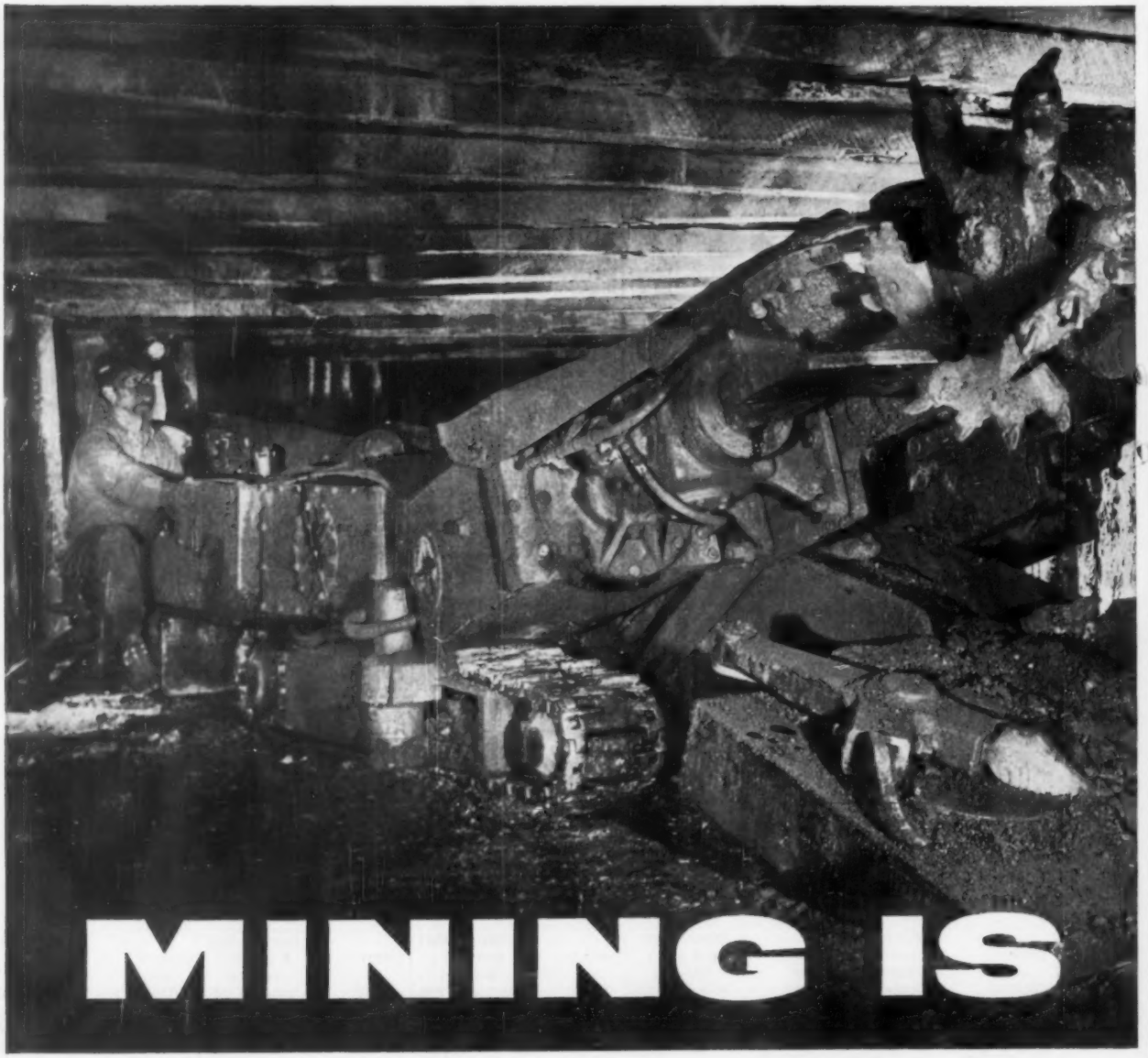
**Treated by BOASI as multiple counties:
Aransas includes Bee, Calhoun, Goliad, Jackson, Refugio, and Victoria.
Gregg includes Rusk and Upshur.
Glasscock includes Midland.
Crane includes Ector, Loving, Reeves, Ward and Winkler.
Callahan includes Jones, Shackleford, and Taylor.
Andrews includes Dawson, Gaines and Martin.
Duval includes Jim Wells and Kleburg.
Austin includes Colorado, Waller and Wharton.
Brewster includes Crockett, Jeff Davis, Pecos, Presidio, Regan, Terrell and Upton.
Fisher includes Nolan and Scurry.
Grimes includes Liberty and Montgomery.



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3. Capital expenditures in coal will top $300 million annually *each year until 1960.*

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5. Taconite mining requires 10 times the investment of ordinary iron mining . . . will ante up $500 million more by 1960 to supply iron ore demand.

6. New ore mining projects announced during 1956 alone called for expenditures of $1.9 billion —yes, *billion.*

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McGraw-Hill Mining Publications
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Contract Construction, Leading Counties

BOASI* Estimates, 1st Quarter, 1956, for 100 Counties with 56.7% of 1956 Employment

COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956	COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956	COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956	COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956	COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956
Los Angeles, Cal.	121,251	Jackson, Mo.	14,506	Santa Clara, Cal.	10,017	Monroe, N. Y.	7,628	Camden, N. J.	5,644
New York (5 Counties), N. Y.	110,963	Westchester, N. Y.	14,428	Tarrant, Tex.	9,609	Greenville, S. C.	7,419	Montgomery, Md.	5,603
Cook, Ill.	89,233	Erie, N. Y.	14,389	Oklahoma, Okla.	9,603	Providence, R. I.	7,376	Passaic, N. J.	5,600
Wayne, Mich.	40,582	King, Wash.	14,262	Henrico, Va.	9,551	Arlington, Va.	7,344		
Philadelphia, Pa.	34,114	Orleans, La.	14,228	Shelby, Tenn.	9,357	Sedgwick, Kans.	7,300	Palm Beach, Fla.	5,595
Harris, Tex.	33,512	Hennepin, Minn.	14,093	Contra Costa, Cal.	9,348			St. Louis, Minn.	5,582
Cuyahoga, Ohio	29,793	Denver, Colo.	13,924	St. Louis, Mo.	9,056	Delaware, Pa.	7,153	Caddo, La.	5,419
Allegheny, Pa.	28,036	Essex, N. J.	13,429			Pinellas, Fla.	7,143	Baltimore, Md.	5,391
Baltimore City, Md.	27,296	San Diego, Cal.	13,236	Norfolk, Va.	9,028	San Bernardino, Cal.	7,084	Mahoning, Ohio	5,343
Dallas, Tex.	23,477			San Mateo, Cal.	8,742	Douglas, Nebr.	7,052	Summit, Ohio	5,255
		New Castle, Del.	12,991	Montgomery, Pa.	8,717	Jefferson, Tex.	7,033	El Paso, Tex.	5,182
Dade, Fla.	21,948	Franklin, Ohio	12,699	Jefferson, Ala.	8,704	Hudson, N. J.	6,961	Kent, Mich.	5,101
San Francisco, Cal.	20,261	Lake, Ind.	12,497	Duval, Fla.	8,525	Oakland, Mich.	6,915	Onondaga, N. Y.	5,065
Nassau, N. Y.	19,727	Jefferson, Ky.	12,145	Hillsborough, Fla.	8,510	Ramsey, Minn.	6,820	Orange, Fla.	5,057
Milwaukee, Wisc.	19,277	Bergen, N. J.	11,702	Sacramento, Cal.	8,476	Worcester, Mass.	6,674		
Alameda, Cal.	18,928	Fairfield, Conn.	11,642	Broward, Fla.	8,409	Salt Lake, Utah	6,568	Total Above Counties	1,416,547
District of Columbia, D. C.	17,592	Bexar, Tex.	11,233	Mecklenburg, N. C.	8,367				
		Hartford, Conn.	10,952	Davidson, Tenn.	8,292	Hampden, Mass.	5,884	% of U. S. A. Total	56.7
St. Louis City, Mo.	16,179	Marion, Ind.	10,818			East Baton Rouge, La.	5,861		
Suffolk, Mass.	15,609	Maricopa, Ariz.	10,668	Montgomery, Ohio	8,065	Guilford, N. C.	5,806		
Hamilton, Ohio	15,461			Tulsa, Okla.	7,966	Bernalillo, N. M.	5,776		
Middlesex, Mass.	15,304	New Haven, Conn.	10,662	Suffolk, N. Y.	7,870	Middlesex, N. J.	5,728		
Fulton, Ga	14,559	Orange, Cal.	10,027	Union, N. J.	7,818	Nueces, Tex.	5,704		
						Norfolk, Mass.	5,650		

Public Utilities, Leading Counties

BOASI* Estimates, 1st Quarter, 1956, for 100 Counties with 63.7% of 1956 Employment

COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956	COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956	COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956	COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956	COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956
New York (5 Counties), N. Y.	247,435	Milwaukee, Wisc.	20,578	Bergen, N. J.	10,005	Onondaga, N. Y.	7,610	Suffolk, N. Y.	5,617
Cook, Ill.	132,546	Erie, N. Y.	20,298	Tarrant, Tex.	9,675	Montgomery, Ohio	7,482	Middlesex, N. J.	5,411
Los Angeles, Cal.	105,271	Alameda, Cal.	20,174	Shelby, Tenn.	9,641	Worcester, Mass.	7,389	Genesee, Mich.	5,198
Philadelphia, Pa.	63,864	Hamilton, Ohio	19,942	Jefferson, Ala.	9,616	Albany, N. Y.	7,319		
Wayne, Mich.	46,829	Denver, Colo.	19,674	Hartford, Conn.	9,324	Sacramento, Cal.	7,296	Bristol, Mass.	5,006
Suffolk, Mass.	43,023	Hennepin, Minn.	18,861	Henrico, Va.	9,324			New Castle, Del.	4,990
Baltimore City, Md.	40,004	Multnomah, Ore.	17,283	Fairfield, Conn.	9,124	Hillsborough, Fla.	7,235	Wyandotte, Kans.	4,966
San Francisco, Cal.	38,329	Middlesex, Mass.	15,481			St. Louis, Mo.	7,196	Camden, N. J.	4,941
Cuyahoga, Ohio	36,114	Marion, Ind.	15,353	Mecklenburg, N. C.	9,013	Delaware, Pa.	7,044	Jefferson, Tex.	4,915
Allegheny, Pa.	33,783			Douglas, Nebr.	8,948	Fresno, Cal.	6,877	San Joaquin, Cal.	4,804
		Nassau, N. Y.	13,277	Arlington, Va.	8,686	Kent, Mich.	6,793	Lackawanna, Pa.	4,773
Harris, Tex.	31,936	Ramsey, Minn.	12,409	Lake, Ind.	8,375	El Paso, Tex.	6,641	Spokane, Wash.	4,733
St. Louis City, Mo.	28,417	New Haven, Conn.	12,371	Monroe, N. Y.	8,196	Caddo, La.	6,597	Allen, Ind.	4,698
Dade, Fla.	27,945	Jefferson, Ky.	12,322	Duval, Fla.	7,863	Hampden, Mass.	6,462	Mercer, N. J.	4,563
Orleans, La.	27,562	Franklin, Ohio	12,200	Union, N. J.	7,859	Mobile, Ala.	6,435		
Dallas, Tex.	27,354	Westchester, N. Y.	11,963	Lucas, Ohio	7,859	Santa Clara, Cal.	6,236	Total Above Counties	1,788,510
Essex, N. J.	26,298	Norfolk, Va.	11,723	Salt Lake, Utah	7,817				
Fulton, Ga.	25,849	San Mateo, Cal.	11,500	Bexar, Tex.	7,813	Polk, Iowa	6,233	% of U. S. A. Total	63.7
Jackson, Mo.	22,627	Tulsa, Okla.	11,468			Montgomery, Pa.	6,178		
King, Wash.	22,159	Providence, R. I.	11,434	Kanawha, W. Va.	7,783	Galveston, Tex.	6,035		
District of Columbia, D. C.	21,381	Summit, Ohio	10,902	Passaic, N. J.	7,727	Lehigh, Pa.	5,892		
Hudson, N. J.	21,295	San Diego, Cal.	10,512	Maricopa, Ariz.	7,722	Sedgwick, Kans.	5,780		
		Oklahoma, Okla.	10,309	Essex, Mass.	7,712	Dauphin, Pa.	5,719		
				Davidson, Tenn.	7,703	Luzerne, Pa.	5,650		

*Bureau of Old Age and Survivor's Insurance.

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Wholesale Trade, Leading Counties

BOASI* Estimates, 1st Quarter, 1956, for 100 Counties with 67.2% of 1956 Employment

COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956
New York (5 Counties), N. Y.	334,589
Cook, Ill.	163,493
Los Angeles, Cal.	128,282
Philadelphia, Pa.	69,549
Wayne, Mich.	61,342
San Francisco, Cal.	49,803
Suffolk, Mass.	49,489
Cuyahoga, Ohio	48,422
St. Louis City, Mo.	44,327
Allegheny, Pa.	38,027
Dallas, Tex.	34,171
Harris, Tex.	34,076
Hennepin, Minn.	31,853
Fulton, Ga.	31,803
Baltimore City, Md.	28,200
King, Wash.	27,202
Jackson, Mo.	26,753
Hamilton, Ohio	25,423
Orleans, La.	24,056
Essex, N. J.	23,496
Milwaukee, Wisc.	23,186
Erie, N. Y.	22,300
Marion, Ind.	21,653
Multnomah, Ore.	20,988
Denver, Colo.	20,255
District of Columbia, D. C.	19,368
Shelby, Tenn.	18,538
Dade, Fla.	18,212
Alameda, Cal.	17,313
Jefferson, Ky.	16,253
Jefferson, Ala.	14,239
Middlesex, Mass.	14,136
Hudson, N. J.	13,575
Franklin, Ohio	13,491
Bexar, Tex.	12,556
Mecklenburg, N. C.	12,328
Henrico, Va.	12,283
Duval, Fla.	11,981
Douglas, Nebr.	11,797
Ramsey, Minn.	11,753
Providence, R. I.	11,634
Hartford, Conn.	11,537
Oklahoma, Okla.	11,410
Lucas, Ohio	11,025
Monroe, N. Y.	10,798
Onondaga, N. Y.	10,620
Salt Lake, Utah	10,361
Maricopa, Ariz.	10,202
Norfolk, Va.	10,121
Hillsborough, Fla.	10,102
Davidson, Tenn.	10,069
Tarrant, Tex.	9,878
New Haven, Conn.	9,850
Tulsa, Okla.	9,489
Polk, Iowa	9,398
Union, N. J.	9,322
Montgomery, Ohio	8,743
Fairfield, Conn.	8,742
Nassau, N. Y.	8,678
Westchester, N. Y.	8,550
San Diego, Cal.	8,506
Bergen, N. J.	8,072
Albany, N. Y.	7,913
Kent, Mich.	7,892
Worcester, Mass.	7,656
Sedgwick, Kans.	7,353
Hampden, Mass.	7,160
Sacramento, Cal.	7,144
Summit, Ohio	6,729
Passaic, N. J.	6,677
Spokane, Wash.	6,611
Knox, Tenn.	6,118
Pulaski, Ark.	5,894
Dauphin, Pa.	5,815
Orange, Fla.	5,777
Fresno, Cal.	5,712
Caddo, La.	5,543
Hamilton, Tenn.	5,529
New Castle, Del.	5,498
Guilford, N. C.	5,308
Camden, N. J.	5,295
Genesee, Mich.	5,240
St. Louis, Minn.	5,084
Essex, Mass.	5,081
Cumberland, Me.	5,019
San Bernardino, Cal.	5,007
El Paso, Tex.	4,840
Allen, Ind.	4,815
Potter (Includes Randall), Tex.	4,788
Mobile, Ala.	4,742
Peoria, Ill.	4,614
Bristol, Mass.	4,511
Santa Clara, Cal.	4,477
Hidalgo, Tex.	4,474
Lancaster, Pa.	4,455
Kanawha, W. Va.	4,404
Lehigh, Pa.	4,394
Dane, Wisc.	4,380
Mahoning, Ohio	4,326
Lake, Ind.	4,324
Total Above Counties	2,028,247
% of U. S. A. Total	67.2

Retail Trade, Leading Counties

BOASI* Estimates, 1st Quarter, 1956, for 100 Counties with 54.3% of 1956 Employment

COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956
New York (5 Counties), N. Y.	447,971
Los Angeles, Cal.	301,920
Cook, Ill.	285,181
Wayne, Mich.	147,472
Philadelphia, Pa.	128,799
Allegheny, Pa.	89,300
Cuyhoga, Ohio	89,145
Suffolk, Mass.	78,362
Baltimore City, Md.	68,889
District of Columbia, D. C.	66,867
Harris, Tex.	62,987
St. Louis City, Mo.	60,570
Erie, N. Y.	58,730
Dade, Fla.	57,314
Milwaukee, Wisc.	56,384
San Francisco, Cal.	55,718
Dallas, Tex.	55,357
Middlesex, Mass.	53,322
Hennepin, Minn.	51,684
Essex, N. J.	51,004
Hamilton, Ohio	47,650
Jackson, Mo.	46,941
King, Wash.	46,339
Nassau, N. Y.	45,914
Alameda, Cal.	44,252
Marion, Ind.	44,066
Fulton, Ga.	43,168
Orleans, La.	38,118
Franklin, Ohio	37,875
Hartford, Conn.	36,209
Denver, Colo.	35,918
San Diego, Cal.	34,801
Bexar, Tex.	33,465
Jefferson, Ky.	33,315
Multnomah, Ore.	32,489
Westchester, N. Y.	32,296
Shelby, Tenn.	31,352
Monroe, N. Y.	30,254
Providence, R. I.	29,851
New Haven, Conn.	29,606
Jefferson, Ala.	29,266
Fairfield, Conn.	28,411
Montgomery, Ohio	27,773
Essex, Mass.	27,175
Bergen, N. J.	27,133
Worcester, Mass.	27,047
Summit, Ohio	27,032
Tarrant, Tex.	26,783
Lucas, Ohio	26,310
Oakland, Mich.	25,248
Norfolk, Va.	24,866
Henrico, Va.	24,563
Ramsey, Minn.	24,553
Maricopa, Ariz.	24,341
Hudson, N. J.	24,148
Hampden, Mass.	23,423
Oklahoma, Okla.	23,007
Onondaga, N. Y.	22,972
Union, N. J.	21,910
Duval, Fla.	21,594
Douglas, Nebr.	20,779
Davidson, Tenn.	20,545
Lake, Ind.	20,429
Norfolk, Mass.	19,669
Montgomery, Pa.	19,599
Santa Clara, Cal.	19,531
Salt Lake, Utah	19,414
Sacramento, Cal.	18,923
Hillsborough, Fla.	18,851
Tulsa, Okla.	18,645
Kent, Mich.	18,585
Orange, Cal.	18,355
Passaic, N. J.	18,321
Genesee, Mich.	17,596
Salt Lake, Utah	17,371
Sedgwick, Kans.	17,166
St. Louis, Mo.	16,986
Pinellas, Fla.	16,430
San Bernardino, Cal.	16,181
New Castle, Del.	15,945
Mahoning, Ohio	15,815
Stark, Ohio	15,714
Albany, N. Y.	15,641
Luzerne, Pa.	15,624
Polk, Iowa	15,392
Suffolk, N. Y.	15,291
Fresno, Cal.	14,704
Camden, N. J.	14,678
Broward, Fla.	14,569
Mecklenberg, N. C.	14,407
Mercer, N. J.	14,187
Spokane, Wash.	13,809
El Paso Tex.	13,710
San Mateo, Cal.	13,568
Arlington, Va.	13,568
Allen, Ind.	13,357
Middlesex, N. J.	13,168
Westmoreland, Pa.	12,962
Dauphin, Pa.	12,970
Total Above Counties	4,188,040
% of U. S. A. Total	54.3

*Bureau of Old Age and Survivor's Insurance.

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SALES MANGEMENT, 386 Fourth Avenue, New York 16, N. Y.

Finance, Insurance and Real Estate, Leading Counties

BOASI* Estimates, 1st Quarter, 1956, for 100 Counties with 72.6% of 1956 Employment

COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956
New York (5 Counties), N. Y.	364,891
Cook, Ill.	127,296
Los Angeles, Cal.	95,095
Philadelphia, Pa.	55,470
Suffolk, Mass.	50,524
San Francisco, Cal.	42,419
Wayne, Mich.	42,357
Essex, N. J.	32,682
Dallas, Tex.	28,327
Hartford, Conn.	27,991
St. Louis City, Mo.	26,880
Baltimore City, Md.	26,869
District of Columbia, D. C.	26,231
Cuyahoga, Ohio	25,867
Allegheny, Pa.	25,121
Jackson, Mo.	20,204
Hennepin, Minn.	20,038
Harris, Tex.	19,797
Fulton, Ga.	19,653
Milwaukee, Wisc.	18,619
King, Wash.	17,492
Marion, Ind.	17,233
Hamilton, Ohio	16,229
Dade, Fla.	15,473
Franklin, Ohio	14,728
Orleans, La.	13,715
Denver, Colo.	13,682
Erie, N. Y.	12,785
Douglas, Nebr.	12,021
Alameda, Cal.	11,851
Jefferson, Ala.	11,473
Multnomah, Ore.	11,458
Henrico, Va.	10,844
Duval, Fla.	10,601
Providence, R. I.	10,473
Jefferson, Ky.	10,399
Polk, Iowa	10,126
Nassau, N. Y.	9,520
Westchester, N. Y.	9,359
Bexar, Tex.	9,232
Ramsey, Minn.	9,128
Shelby, Tenn.	8,745
Tarrant, Tex.	8,308
Oklahoma, Okla.	8,296
New Haven, Conn.	7,948
Hudson, N. J.	7,877
Middlesex, Mass.	7,724
San Diego, Cal.	7,497
Hampden, Mass.	7,390
Monroe, N. Y.	7,306
Onondaga, N. Y.	7,183
Maricopa, Ariz.	7,097
Salt Lake, Utah	6,477
Mecklenberg, N. C.	6,450
Tulsa, Okla.	6,380
Worcester, Mass.	6,362
Davidson, Tenn.	6,281
Fairfield, Conn.	6,120
New Castle, Del.	5,760
Albany, N. Y.	5,546
Dauphin, Pa.	5,529
Sacramento, Cal.	5,483
Norfolk, Va.	5,249
Bergen, N. J.	5,186
Lucas, Ohio	5,128
Passaic, N. J.	5,057
Montgomery, Ohio	4,949
Union, N. J.	4,785
Sedgwick, Kans.	4,777
Pulaski, Ark.	4,647
Guilford, N. C.	4,626
Kent, Mich.	4,579
Hamilton, Tenn.	4,566
St. Louis, Mo.	4,412
Santa Clara, Cal.	4,369
Essex, Mass.	4,303
Arlington, Va.	4,214
Lake, Ind.	4,122
Allen, Ind.	4,072
Summit, Ohio	4,054
Camden, N. J.	4,039
Orange, Cal.	4,025
Spokane, Wash.	3,967
Norfolk, Mass.	3,839
Hillsborough, Fla.	3,821
Pinellas, Fla.	3,794
Wake, N. C.	3,792
Richland, S. C.	3,757
Mobile, Ala.	3,742
Hinds, Miss.	3,667
Delaware, Pa.	3,659
Broward, Fla.	3,652
Orange, Fla.	3,561
Montgomery, Pa.	3,559
San Mateo, Cal.	3,504
St. Joseph, Ind.	3,498
Mercer, N. J.	3,462
Berks, Pa.	3,334
Dane, Wisc.	3,315
Peoria, Ill.	3,305
Total Above Counties	1,656,279
% of U. S. A. Total	72.6

Service Industries, Leading Counties

BOASI* Estimates, 1st Quarter, 1956, for 100 Counties with 64% of 1956 Employment

COUNTY and STATE	EMPLOYMENT B. O. A. S. I. Estimates 1st Quarter, 1956
New York (5 Counties), N. Y.	412,131
Los Angeles, Cal.	232,024
Cook, Ill.	193,950
Wayne, Mich.	87,637
Philadelphia, Pa.	68,902
Suffolk, Mass.	54,437
District of Columbia, D. C.	50,373
Cuyahoga, Ohio	49,347
Allegheny, Pa.	48,208
Dade, Fla.	47,717
San Francisco, Cal.	47,280
St. Louis City, Mo.	38,080
Harris, Tex.	35,453
Dallas, Tex.	32,351
Baltimore City, Md.	32,095
Essex, N. J.	30,829
King, Wash.	28,560
Hennepin, Minn.	28,147
Jackson, Mo.	27,913
Milwaukee, Wisc.	27,473
Hamilton, Ohio	27,208
Fulton, Ga.	25,248
Erie, N. Y.	24,414
Alameda, Cal.	24,330
Orleans, La.	23,457
Marion, Ind.	21,990
Denver, Colo.	20,979
San Diego, Cal.	20,247
Middlesex, Mass.	19,553
Nassau, N. Y.	19,389
Multnomah, Ore.	19,154
Franklin, Ohio	18,740
Westchester, N. Y.	17,890
Shelby, Tenn.	17,275
Bexar, Tex.	16,811
Hartford, Conn.	16,437
Jefferson, Ky.	16,340
Jefferson, Ala.	15,098
Union, N. J.	14,593
Fairfield, Conn.	14,325
Maricopa, Ariz.	14,271
Providence, R. I.	13,947
New Haven, Conn.	13,794
Tarrant, Tex.	13,720
Oklahoma, Okla.	13,551
Monroe, N. Y.	13,511
Hudson, N. J.	12,766
Lucas, Ohio	12,531
Montgomery, Ohio	12,395
Douglas, Nebr.	12,230
Clark, Nev.	11,995
Duval, Fla.	11,741
Davidson, Tenn.	11,436
Bergen, N. J.	11,252
Ramsey, Minn.	11,016
Tulsa, Okla.	10,730
San Bernardino, Cal.	10,501
Summit, Ohio	10,352
Essex, Mass.	10,249
Onondaga, N. Y.	10,123
Oakland, Mich.	10,074
Santa Clara, Cal.	10,073
Salt Lake, Utah	9,976
Broward, Fla.	9,929
Norfolk, Va.	9,831
Worcester, Mass.	9,648
Pinellas, Fla.	9,377
Polk, Iowa	9,138
Sacramento, Cal.	8,911
Kent, Mich.	8,879
Sedgwick, Kans.	8,841
Hillsborough, Fla.	8,823
Hampden, Mass.	8,817
Passaic, N. J.	8,698
Palm Beach, Fla.	8,638
Mecklenburg, N. C.	8,622
Montgomery, Pa.	8,590
Orange, Cal.	8,516
Spokane, Wash.	7,592
San Mateo, Cal.	7,477
Camden, N. J.	7,418
Atlantic, N. J.	7,389
Norfolk, Mass.	7,384
Dauphin, Pa.	7,311
Albany, N. Y.	7,241
St. Louis, Mo.	7,211
New Castle, Del.	7,202
Lake, Ind.	7,138
Hamilton, Tenn.	7,039
Fresno, Cal.	6,963
Pulaski, Ark.	6,870
Delaware, Pa.	6,850
Mercer, N. J.	6,840
Riverside, Cal.	6,763
Travis, Tex.	6,703
Suffolk, N. Y.	6,684
Mahoning, Ohio	6,576
Berks, Pa.	6,429
Pima, Ariz.	6,175
Total Above Counties	2,534,589
% of U. S. A. Total	64.0

*Bureau of Old Age and Survivor's Insurance.

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The rankings shown here represent a small part of the available material. Complete county listings may be obtained at a nominal cost from Market Statistics, Inc., 432 Fourth Ave., New York 16, N. Y. Murray Hill 4-3559

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More Sales—

Through Better Plant Location

By Leonard C. YASEEN, *Senior Partner, Fantus Factory Locating Service*

Among the many changes in the American economy during the past few decades, none is more dramatic or more far-reaching than the decentralization of markets and industry. To compete effectively under these changing market conditions, the industrialist must drastically modify his production program and distribution methods.

Historically, the population and industrial heart of the United States was composed essentially of the North Central and Eastern states. In 1920, this traditional manufacturing belt encompassed approximately one-half of the nation's total population and held the vast majority of our industry. Value added by manufacture in this concentrated area accounted for more than three-fourths of the nation's total.

Today, 78 million persons populate this region but 93 million live in the West and South. In just seven years it is estimated that 17 million more people will permanently reside *outside* this northeastern area than live within it.

Since 1920, the number of residents of California and Florida has tripled. California now boasts 14 million persons, Florida four million, Texas over nine million.

A glance at the leading 50 cities in retail sales, as reported in SALES MANAGEMENT, reveals many communities that are west of or straddling the Mississippi River and a goodly number in the South. They include Houston, Miami, Los Angeles, St. Louis, Dallas, San Francisco, Oakland, Seattle, San Diego, Kansas City, Atlanta, Denver, Portland, New Orleans, Louisville, Memphis, Fort Worth, San Jose, and San Antonio. Examining the next ten cities in retail sales importance, we find that *six* of these communities are in fast-growing new areas.

The old industrial concentrations must now share purchasing power with newer regions. In 1939, the traditional belt boasted 69% of all employment in manufacturing establishments. By 1960, the West and South will represent at least 40%.

New Roots for Plants

Listed in "Who's Who" as an authority on plant location, Leonard C. Yaseen has guided more than 1,500 companies in their location problems in the United States, Canada, South America and Europe. As senior partner of Fantus Factory Locating Service, New York and Chicago, he has helped plant new roots for such diverse industrial giants as Westinghouse, Philco, Oakite, Weyerhauser Lumber, American Brass and others. He is also president of Fantus Area Research which conducts scientific industrial development surveys for communities, railroads and utility companies. A University of Illinois graduate, Mr. Yaseen is the author of "Plant Location", a standard text published by the American Research Council, the plant location chapter of the new McGraw-Hill "Engineering Handbook" and numerous articles.

Significantly, almost every new industrial job created in the eastern or central states is now counter-balanced by hiring of another production worker in the West or South.

Total expenditures for new plant and equipment are equally impressive. Every year for the past eight years, manufacturers spent more for expansion in *each* of the states of California and Texas than in all the New England States combined. During 1955, the last official Department of Commerce Summary of Manufacturers revealed that new plant expenditures were $1.4 billion in the southern states lying east of the Mississippi River. This is almost equivalent to the expenditure of $1.5 billion in the Middle Atlantic Census Region composed of the highly industrialized states of New York, New Jersey and Pennsylvania.

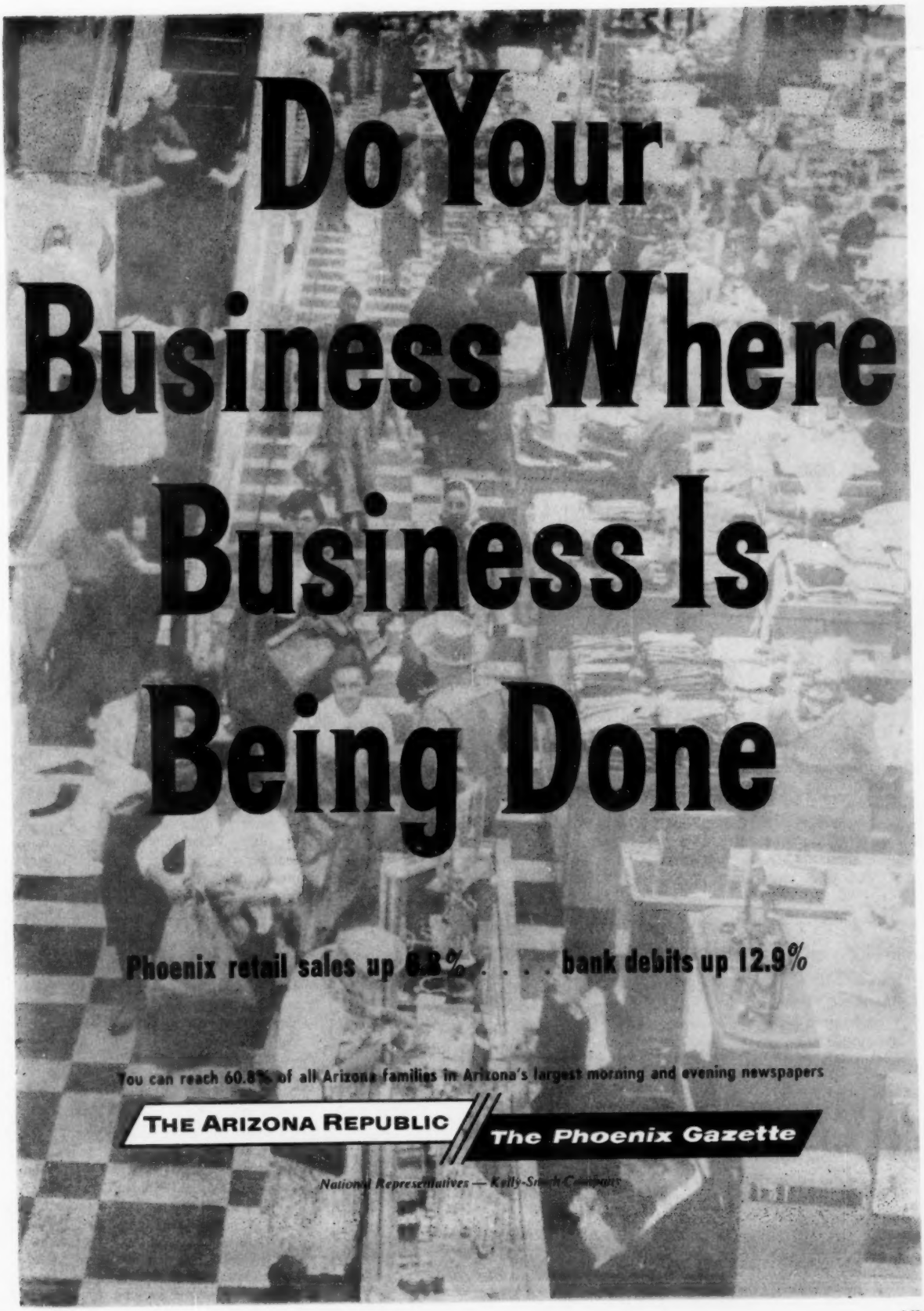
How does all this affect location planning? For small, single plant companies serving a purely local or regional market the influence is minor. But for manufacturers selling a national market, the next several years may be crucial. It is quite obvious that a single static production unit can no longer effectively saturate an expanding decentralized market.

Establishment of branch plants or distribution warehouses carefully located in respect to present and future growth is the only sound answer to survival in the bitterly competitive period that lies ahead.

Spiraling increases in distribution costs tend to foster the growth of competition in localized markets. High freight costs raise a protective umbrella for small subregional producers. Despite low-volume production, these local competitors can offer lower delivered prices and better service.

As an example, let us consider shipping costs on an electrical device used for control of industrial processes. A typical manufacturer situated in northeastern New Jersey faces freight costs of $3 to $4 per 100 pounds on carloads consigned to his distributors throughout the Gulf Coast states. On shipments to his West Coast distributor, this manufacturer has a carload rate of $7.75 per 100 pounds.

Assuming that the device weighs about 100 pounds and sells for $100, smaller competitors in the Gulf Coast market area could have F.O.B. prices almost $2 higher per unit and still capture the regional market. A marginal producer on the West Coast can have F.O.B. prices which are $5.00 higher per unit and yet dominate that rich market on the basis of equal or lower delivered cost and superior service.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Phoenix retail sales up 8.8% . . . bank debits up 12.9%
You can reach 60.8% of all Arizona families in Arizona's largest morning and evening newspapers
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The Phoenix Gazette
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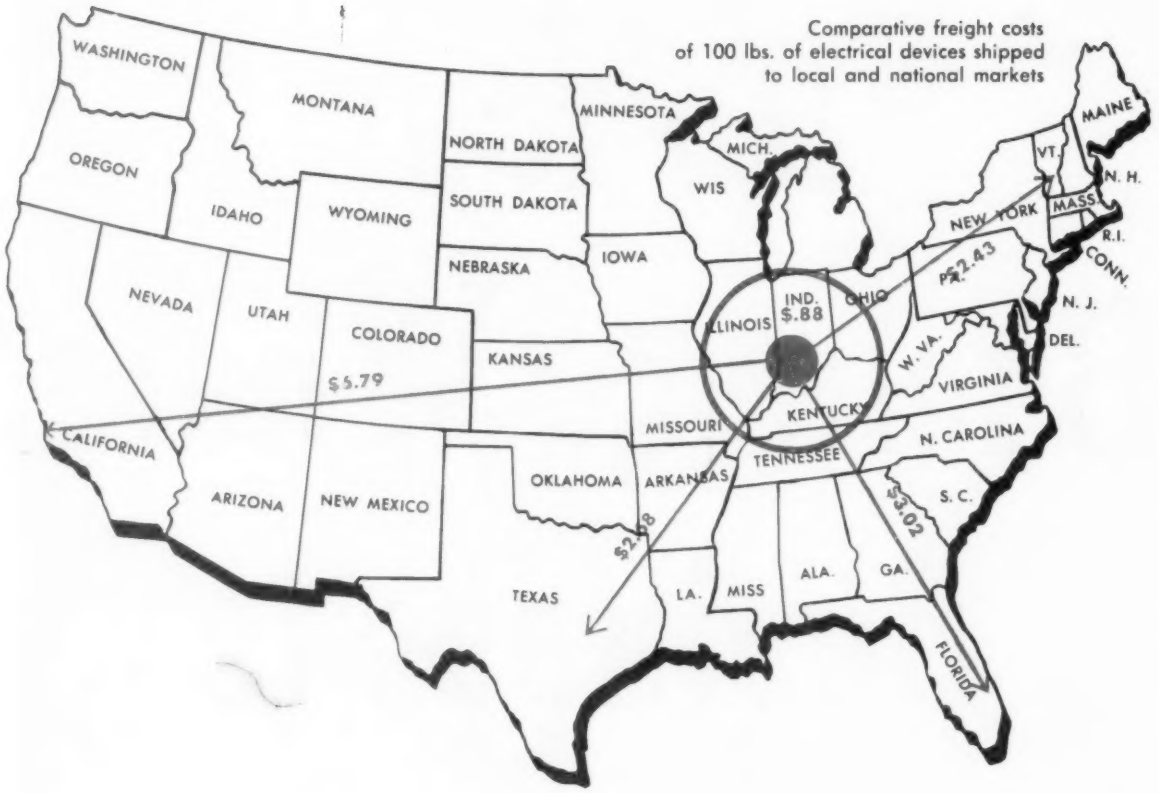
THE DIFFERENCE THAT LOCATION MAKES



Since World War II, railroad operating costs have increased sharply—and accordingly freight rates are increasing at a faster pace than prices. Since the base period, 1935-39, retail prices on all commodities have advanced about 117%. In direct contrast, the class rates applicable between New York and Chicago have gone up 171% or about 50% more than prices.

The treasurer of a sizable plant located in western Ohio recently said to one of our partners, "Yes, our outbound transportation bill last year was surprisingly high. It amounted to almost $650,000 but it still represents only 2½% of our sales dollar." Upon further study it was found that freight costs actually averaged less than 1% of prices within a 200-mile circle of his plant. What this treasurer did not realize was that for every dollar of merchandise shipped *beyond* that radius, the company was paying an average of 4% for distribution—as high as 7% on some shipments.

COMPARATIVE DELIVERY COSTS
(in cents per 100 lbs.)

Shipment Through Warehousing Facility	*Location of Customers*	
	Within City Limits	*40-Mile Radius*
Truckload from plant to warehouse	$2.14	$2.14
Drayage from warehouse to customer	.44	1.05
Overhead and labor costs in warehouse (per cwt.)	.40	.40
Total cost of shipment	$2.98	$3.59
Shipment Direct to Customer	$3.05	$3.05
Profit (or Loss) *Through Warehousing*	$ .07	($ .54) loss

And, a great deal of merchandise was being shipped beyond that radius. The company's largest single sales area lies at the eastern extreme of its national market and the fastest growing sales area lies at the southeast and western extremes. In planning for location, it is absolutely essential to examine the ratio of sales costs to sales dollar on a *regional* basis.

Failure to meet sales expectations in distant areas is frequently blamed on the company sales force. Often high regional distribution costs and poor customer service are responsible.

As an example, let us consider the problem of a leading manufacturer of industrial cleaning compounds. Management became alarmed when its ratio analysis showed that ware-

LOOK AT LOUISIANA'S GROWING MARKET

POPULATION : Last year, Louisiana's rate of growth exceeded the national average. Current population estimates show Louisiana's population is now 3,087,600.

PER FAMILY INCOME : While the national average increase of per family income in the U.S. last year was 3.2%, Louisiana families showed an average increase of 4.9%. Per family income in Louisiana is now $4,897.

EFFECTIVE BUYING INCOME : Louisiana's buying power jumped to $4,126,758,000, an increase of 7.1% in the past year. The national growth rate was 5.1%. Retail sales in Louisiana rose 7.2%, compared to the national average of 4%. Current retail sales run $2,960,277,000.

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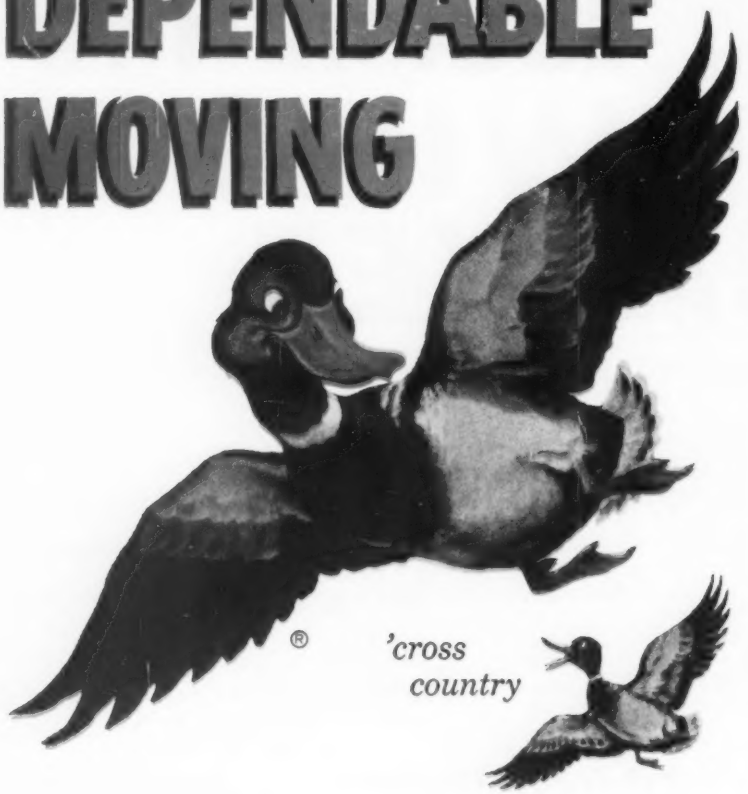

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housing charges to total delivered-to-customer costs had increased 2% in a single year. Pricing systems were altered to recapture a portion of this cost but the company faced increasing sales resistance under that program. Other aspects of the problem involved frequent inter-plant shipments and the cost of returning empty carboys and their repair, which exceeded $100,000 per year.

Survey Points to Another Area

Company executives had tentatively selected a site in a Pacific Coast state for a new plant, believing that this would reduce freight penalties to that growing market. Our analysis showed, however, that it was imperative for the company to establish new production facilities in the Midwest. Production in this area would immediately permit establishment of a uniform pricing system to all markets east of the Rocky Mountains and eliminate over fifty clerical jobs in the sales department required under the present complicated warehousing and zone-price system.

The Fantus survey also revealed that the Pacific Coast market could be served through a small "packaging" plant rather than an expensive processing facility. The new Midwestern and Far West facilities would yield a saving of $93,600 in labor costs of carboy repair alone and the delivered price system would eliminate losses of $150,000 in freight charges not recaptured under the zone-price system.

For some manufacturers of industrial goods, the strategic location of distribution warehouses may accomplish the objective of lower freight costs and improved customer service. However, our investigations have revealed many serious mistakes on the part of firms using this method of "cost reduction."

Frequently, warehouses are built without full appreciation that the available freight "spread" is insufficient to warrant the capital outlay involved. The accompanying example of delivery costs taken directly from a Fantus study, illustrates that warehousing is not always desirable or economical. Note that this facility can distribute goods only to customers within city limits and that all stock consigned to destinations outside the city involves a loss.

Of course, not all savings can be attributed to transportation. In order to compete in regional markets, it is necessary to consider production as well as distribution costs. As a case history, we can examine the problem of a moderate-size metalworking firm with 400 employes in the New York

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☐ Send your Port magazine, "Harbor Highlights"

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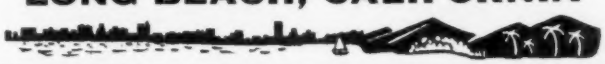
LONG BEACH, CALIFORNIA



area. In 1954, when we began our location study, it was found that the firm's profit margin on total gross sales of $10 million was approximately 8.5% before taxes, and declining. The downward trend was attributed to increased transportation costs, higher and higher labor rates, and congested plant layout.

By examining the marketing structure, it was estimated that setting up a branch plant in the Missouri River Valley could accomplish economies of 20%, or $80,000 in total outbound transportation costs to the national market. In addition to these reductions in freight cost, regional differentials in wage rate patterns indicated payroll savings of $199,000, or about 11%.

Freeing up congested floor space in the main plant, lower workmen's compensation rates on that portion of the transferred payroll and related economies would account for additional savings of $52,000.

A plant was constructed on long-term state financed basis, and by the end of 1957 profit margins had increased to over 12%. Labor training costs had been absorbed, annual production and distribution economies *exceeded* our original estimate of $332,000, a new product research department had been organized and sales within the area served by the new unit increased 21%.

This revitalization process was accompanied by a series of intangible benefits which I should like to review a little later on because of their universal application.

The case history which has been discussed briefly is typical of medium size, single plant operations. But *every* company today may well be concerned with rising costs and competitive position in tomorrow's markets.

Labor Must Be Considered

Labor has been a dominant force in the trend toward regional production. In 1949 gross average hourly earnings of production workers in manufacturing throughout the country were $1.40. The most recent calculations show the present average to be $2.09 per hour. Under the influence of strong unionization and labor shortages, wage rate patterns within plants have been altered with unskilled workers receiving disproportionately high earnings. The result has been disturbing not only in terms of rising payroll costs, but also in a general tendency toward reduction in incentive of individual workers to advance in skills. Much of the touted increase in worker productivity has, in fact, been due to improved machinery

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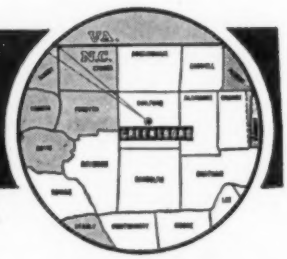
Only medium with dominant coverage in the Growing Greensboro Market and with selling influence in over half of North Carolina!

Sales Management Figures

Greensboro News and Record



GREENSBORO, NORTH CAROLINA
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and manufacturing techniques rather than closer application of the worker to his job.

Some companies minimized payroll costs by moving highly repetitive, unskilled fabrication or assembly out of the main plant to areas where wage pressures are lower. This permits the main plant to concentrate on those products requiring the skilled labor which has been developed and/or act as a pilot operation before new products are added to the branch assembly unit.

In the decentralization process, it has often been found that most "skills" can be broken down into groups of related "semi-skills." Many highly integrated products can be re-engineered to simplify and reduce specialized labor requirements.

As demonstrated by U. S. Department of Labor figures, industry is becoming less and less dependent upon the reservoirs of skilled labor normally associated with the old industrial centers. Despite increased complexity of modern manufacturing techniques, the proportion of skilled workers in the national labor force has remained constant at 13-14% since 1920. Conversely, the proportion of semi-skilled workers has been growing rapidly.

Wage rates, of course, will continue to play an important role in determining location, particularly for labor-oriented industries. Regional differentials are well known. The question is often asked, however, will they persist?

A comparison of *identical job occupations* will quickly allay any doubts as to the continuance of these differentials. The Bureau of Labor Statistics reports average union wage scales in building trades as of July 1, 1957, to be $3.50 hourly in the Middle Atlantic region as compared to $2.70 in the Southeast, a difference of $.80 an hour in an identical occupation.

In fabricated structural steel establishments in the spring of 1957, average hourly earnings in the Middle Atlantic region were $2.19 as com-

TAXES LEVIED ON A HYPOTHETICAL CORPORATION IN NINE LEADING INDUSTRIAL STATES

State	Total—State and Local Taxes	State Unemployment Compensation Tax Rate	Cost	Workmen's Comp. Foundries—Non Ferrous Ins. Rate	Cost	Total All Taxes
A	$260,724	$ .90	$31,500	$3.27	$114,450	$406,674
B	191,494	1.50	52,500	3.80	133,000	376,994
C	262,307	1.60	56,000	1.40	49,000	367,307
D	223,350	.80	28,000	1.64	57,400	308,750
E	130,537	1.60	56,000	2.95	103,250	289,787
F	152,563	.90	31,500	1.51	52,850	236,913
G	101,824	.70	24,500	3.07	107,450	233,774
H	100,126	1.00	35,000	1.24	43,400	178,526
I	84,686	.70	24,500	1.90	66,500	175,686

SCRANTON Leads IN PENNSYLVANIA!
INDUSTRIAL PLANTS BUILT OR ACQUIRED IN PENNSYLVANIA WITH COMMUNITY FINANCIAL PARTICIPATION PRIOR TO SEPTEMBER 1956.
SINCE 1956, CHRYSLER CORPORATION AND CONSOLIDATED MOLDED PRODUCTS CORPORATION PLANTS HAVE LOCATED IN THE SCRANTON AREA.
THE 9 PLANTS IN PITTSTON ARE LOCATED IN THE SCRANTON TRADING AREA. 3 MORE HAVE STARTED IN OPERATION SINCE 1956.
Prepared by—
RESEARCH DIVISION, BUREAU OF INDUSTRIAL DEVELOPMENT, PENNSYLVANIA DEPARTMENT OF COMMERCE.
★ FROM The New York Times, SUNDAY, NOVEMBER 3, 1957.
* Scranton and Pittston Listing Enlarged For Emphasis.
Communities
Number of Plants Financed
Employment in Plants Financed
Altoona 9 2,690
Ashland 2 314
Bradford 3 750
Burgettstown 1 50
Butler 2 365
Clarion 1 100
Clearfield 4 280
Cresson 1 32
DuBois 2 213
Ellwood City 11 1,627
Elysburg 1 62
Freeland 1 100
Greenville 14 915
Hastings 1 15
Hazleton 2 445
Indiana 2 500
Jamestown 1 125
Jersey Shore 2 153
Jim Thorpe 1 15
Johnstown 1 216
Lansford 1 320
Lehighton 4 197
Lilly 1 60
Mahanoy City 2 510
Mansfield 1 5
Masontown 1 144
Minersville 2 184
Mount Pleasant 2 241
Nanticoke 2 500
New Bethlehem 1 155
New Castle 3 73
Northampton 1 50
Patton 2 425
Pittston 9 2,340 *
Pottsville 5 1,562
Punxsutawney 1 75
Reading 1 325
Sexton 1 125
Sayre 2 851
Scranton 24 8,683 *
Shamokin 1 100
Shenandoah 1 196
Stroudsburg 1 85
Sunbury 3 1,381
Troy 1 25
Tyrone 1 180
Uniontown 2 485
Vandergrift (Apollo and Leechburg) 1 200
Weatherly 1 27
Wellsboro 1 300
Wilkes-Barre 9 2,202
Williamsport 1 75
TOTAL—52 ★ 151 31,028
The Scranton Times
•GEORGE A. McDEVITT CO., INC., National Representatives • New York, Chicago, Philadelphia, Detroit, Los Angeles

pared to $1.81 in New England, $1.75 in the Southwest and $1.64 in the Southeast. At the beginning of 1947, machine cutters in the men's shirt industry received $2.08 in the Middle Atlantic states as compared to $1.48 in the Southeastern states.

There are wage extremes even *within* regions — labor costs are higher in large cities than in smaller communities. For example, average weekly earnings for October 1957 in the state of New York were approximately $82 as contrasted to Buffalo, $97, and Rochester, $88. Average weekly earnings in Georgia in that period were $59 as compared to $80 at Savannah; West Virginia was $84 whereas Charleston was $104.

Taxes Increasingly Important

For many companies, labor, in all its ramifications, will dominate management planning, but rising state and local taxes will assume increasing importance in area selection. Taxes vary greatly, but unfortunately, a cursory examination of tax rates can be most deceptive.

A 5% income tax in one state may actually prove less burdensome than a 4% rate in another since some states permit deduction of Federal tax, effectively reducing the rate by 52%. Some states have a "franchise" tax based on income and others have an income tax which is really a franchise tax. The single factor of sales within the state determines income tax liability for companies in certain areas.

Careful calculations are recommended, since tax laws impinge on virtually every business decision, particularly in considerations leading to plant expansion. Hidden corollary effects of high taxation increase almost every company expenditure.

The tax burden of a hypothetical corporation, a non-ferrous foundry, with sales of $13.5 million was examined in nine selected industrial states. Principal corporate taxes, both state and local, unemployment compensation rates, and workmen's compensation taxes were included.

As illustrated in the accompanying chart, the tax burden in state A would be $406,000 as compared to $175,000 in state I.

THE SOUTH BEND TRIBUNE ANNOUNCES

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Talk about Flexibility...

The South Bend Tribune's new general advertising rates offer advertisers new flexibility. Select the contract that suits your needs—and saturate Indiana's 2nd market with only one newspaper, the South Bend Tribune.

- **NEW BULK DISCOUNTS:** You enjoy contract discounts whether you run 500 lines or 100,000 lines in a contract year.
- **NEW FREQUENCY DISCOUNTS:** Whether your frequency is 10 or 50 weeks in a contract year, you benefit from reduced contract rates.
- **NEW PRE-SELL, HARD-SELL DISCOUNTS:** Earn an additional 20% discount in the South Bend Tribune Sunday Magazine by running a schedule in the daily South Bend Tribune.

*Effective Sept. 1, 1958

Color — Black and 3 colors available daily and Sun.—1,000 line minimum.

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Los Angeles, Calif.—1651 Cosmo St.
Cleveland, Ohio—1900 Euclid Ave.
Atlanta, Ga.—933 Healey Bldg.
Boston, Mass.—Statler Bldg.
San Francisco, Cal.—703 Market St.
Miami, Fla.—200 S. Miami Ave.
Detroit, Mich.—1775 Penobscot Bldg.

The South Bend Tribune

TEST TOWN U.S.A.

The South Bend, Ind. Market: 7 Counties, 1/2 Million People

Franklin D. Schurz—Editor and Publisher

During recent years, many states have enacted enabling statutes which, in effect, substantially reduce the required investment of firms in new industrial structures. In some states, municipalities or counties may incur debt and issue negotiable bonds for the acquisition of land or construction of buildings for new industry. Since interest on these bond issues for the investor is tax-free, the cost of borrowing is reduced below that which a company can negotiate for itself.

In many other states, municipalities cannot issue general obligation bonds for this purpose, but they are permitted to erect structures using first lien bonds on the premises, local participation in second liens and even state participation where necessary. In one eastern state, for example, 100% financing has been widely advertised with the state underwriting a portion of the second mortgage at interest rates as low as 2%.

Of course, the advantages of community participation extend beyond considerations of capital outlay. Where the man on the street is financially interested in the success of the operation, labor relations problems are less frequent. Tax assessments and municipal facility rates are found to be more equitable and excellent community cooperation can be anticipated in the matter of street maintenance, water and sewer line construction, etc.

This is precisely what happened to the metalworking firm to which we referred earlier. It fell heir to many unexpected intangible benefits, found that cooperative community attitudes encouraged company growth and fostered cordial in-plant relations.

The union at the home plant now had to face the cold hard fact that the company could achieve maximum productivity elsewhere without high wage rates, burdensome fringe benefits and restrictive work practices. This had an important influence on contract negotiations.

Establishment of another plant closer to customers provided better, quicker service, frequently cutting transit time in half.

Redesign of production flow in the new operation accomplished unexpected improvements in the quality of the product. Less handling and relative ease of inspection controls resulted in fewer rejects. Methods developed in uncrowded facilities were translated back to the main plant where floor space had been released for the first time.

Yes, the rewards of proper geographic location are great. But many pitfalls lie in wait for even the most experienced investigator who must develop the mechanics of approaching and solving the over-all locational problem. The multiplicity of problems, the evaluation of contradictory and conflicting data, the final fusing of tangible and intangible factors, further complicated by the constant shifting of our dynamic national economy, demand the most mature business judgment and experience.

In summary, the most penetrating executive planning will not produce high profit margins if manufacturing and distribution are geographically unsound. Superior product design, new machine tools and streamlined clerical procedures can help in maintaining your competitive position. But the greatest single remaining cost variable within the discretionary power of the business executive today lies in the direction of industrial geography.

Industrial Market Data

(*continued from page 79*)

Automotive Industries, Chestnut and 56th Streets, Philadelphia 39, Pa.: Two reports: "Consumption of Steel by Market Classification—1957" compares the markets of various metalworking and metal-consumer industries. It includes charts based on the American Iron & Steel Institute's complete reports on steel shipments to specific markets by grade and shapes of steel, for 1957. "Grinding Wheels and Coated Abrasives" reports findings of a survey of the market covered by *Automotive Industries*.

Automotive News, 2666 Penobscott Bldg., Detroit 26, Mich.: Three studies: "1958 Automotive News Almanac," a 300-page reference book presenting data on all phases of the automotive industry; industry trends; engineering trends; new and used car prices; finance; tax and labor. Includes pictures and biographical sketches of 1,200 industry leaders and a buyers' guide giving personnel and product information about 2,000 automotive concerns. $2.50 a copy.

Aviation Age, 205 E. 42nd St., New York 17, N. Y. Six marketing aids: "Changing Aviation Market," a 20-minute sound slide film analyzing basic industry changes and trends. Includes key developments by government and industry leaders. "Facts and Fancies About Missiles," an 8-page booklet designed to clarify the role of missiles in the nation's defense arsenal, including an analysis of the companies responsible for development of unmanned weapon systems. "Department of Defense Statements of Policy" covers guided missile programs (Air Force, Navy, Army). "Missiles Impact on Aviation Industry," based on an exclusive *Aviation Age* interview with the Assistant Secretary of the Air Force for Research and Development. It discusses Air Force missile procurement practices, the role of prime contractors in missile development, etc. "State of the Aviation Industry," a special market report designed to provide a clearer picture of how government and industry leaders assess the present state of the aviation industry. "Space Flight: A $2-Billion-A-Year U. S. Business," a special report on the future of space flight as a market.

Baking Industry, 105 W. Adams St., Chicago 3, Ill. Two studies: "1957 Survey Report" which presents individual profiles of the large, medium and small wholesale bakers in each of five regions. It includes gross sales; profits; roll tonnage; sweet goods tonnage; pie tonnage; stale returns. "The Bakery Market Fact File" which includes data on why baking is big business; real measure of baking's business; bread—biggest turnover item in food stores; what the market holds; production — reason behind baking's mammoth appetite; how 79,000 trucks keep baking industry rolling ahead.

Brick & Clay Record, 5 S. Wabash Ave., Chicago 3, Ill.: "How to Sell a Brick Plant," a handbook for distributors and supplier salesmen, which describes equipment used in clay products manufacturing and suggests methods and means the supplier can use to sell to this industry.

Building Supply News, 5 S. Wabash Ave., Chicago 3, Ill. Six studies: "Windows" covers how they are sold, who sells them, who buys them, what types, what quality, sales outlook. "A Comprehensive Survey of the Operations of Lumber and Building Material Dealers" examines dealers' locations, sales volume, stocks and various types of customers. "Ready Mix Concrete and the Lumber and Building Material Dealer" provides data on the type and size of lumber and building material dealer ready mix concrete operations. "Sash and Door Jobbers Products Sales Activity and Experience" shows the number and percentage of jobbers handling various products and their ratings of those products (in the jobbers' own experience) as excellent, good, or fair, as a product to be handled. "Ceramic Tile Market Opens to Lumber Dealers" covers the demand for tile, increase in production, and how tilemakers are wooing small-town lumber dealers; do-it-yourself application, and the profit that can result from this quality market. "Green Thumb . . . a Blooming Dealer Business" shows why the lumber and building material dealer should become a lawn and garden supply merchant; presents data on the growth of the market; shows how most of this merchandise can be sold without involved sales presentations; reports seasonal sales volume, etc.

Ceramic Industry, 5 S. Wabash Ave., Chicago 3, Ill. Three studies: "Electronics and New Ceramics," a comprehensive review of the progress made in this infant industry since its inception. Includes market trends and raw materials used in the industry. "Glass Know-How" includes scores of ideas on glass making and information about markets, trends and raw materials used in the industry. $2 a copy. 10 or more copies, $1.50 each. "Porcelain Enameling Know-How" includes ideas on porcelain enameling, marketing trends and raw materials used in that industry. $2 a copy; 10 or more copies, $1.50 each. Also "1958 Ceramic Industry Market Wall Chart," showing composite trend curves for all phases of the ceramic industry, with interpretative report on growth potential and outlook for the industry.

Chemical Engineering, 330 W. 42nd St., New York 36, N. Y. Four market studies: "Electrical Energy Consumed—Chemical Process Industry vs. All Manufacturing" gives breakdown of CPI consumption and purchase of electrical energy. Statistics show CPI buys and generates more electricity than any other industry complex. Charts break down consumption and purchases by 18 segments of the CPI, give energy requirements of various processing operations. "Summary of Buying Influence Studies Conducted by Daniel Starch & Staff, 1955-57": 828 *Chemical Engineering* readers were interviewed and asked for influences in buying equipment and raw materials used in the chemical process industries. "The Market for Chemicals in the Petroleum Industry," a detailed analysis of the fast-growing petroleum industry's use of chemicals. "The Chemical Process Industries as a Market for Pumps." Since CPI constitutes the coun-

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Lynchburg (Campbell County) is the most diversified industrial region in central Virginia, with employment in *every* S.I.C. manufacturing category. In only 8 of these are there less than 100 employees. See Virginia table above.

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try's largest market for pumps, this report shows types and uses of this equipment. A data sheet also notes types of pumps used in the production of such products as alcohol, cement, coal, tar and plastics.

Chemical Week, 330 W. 42nd St., New York 36, N. Y. Five reports: "Forecast '58," for the chemical and allied industries. Includes the outlook for business in 10 important sectors of the chemical process industries and gives CPI management the benchmarks for decision-making in 1958 "How to Ease the Pressure of the Big Profit Squeeze" shows how to go about adopting an organized approach to cost cutting. "Expenditures for Chemicals, Raw Materials, Energy and Contract Work in the Chemical Process Industries" covers expenditures from 1947 through 1957. "Electrical Energy Consumed: CPI vs. All Manufacturing" gives the breakdown of statistics as reported in the 1954 Census of Manufactures. "The Chemical Process Industries General Statistics for the United States—1954" (from U. S. Census of Manufactures) includes value added by manufacture; expenditures for plant and equipment; value of shipments; SIC data.

Coal Age, 330 W. 42nd St., New York 36, N. Y. Four reports: "Condensed Data on Coal Mining" presents highlights of industry statistics, future trends, market potentials for equipment, buying influences, etc. "U. S. Coal Production by State—1956-57" includes production (net tons) and 1957 estimated coal production—bituminous and anthracite. "Mechanical Cleaning Plants in Operation or Under Construction in the Bituminous Coal Mining Industry in 1957" covers company, location, equipment, capacity. "70-Yd-King of Spades: Pacesetter at New River King" details the world's largest stripping shovel, Big Haul, The King of Spades, which wears a big crown at the Peabody Coal Company's River King mine near Freeburg, Ill. Also a series of data sheets providing statistics on bituminous coal operating methods and equipment in use, including Mechanical Cleaning; Oil Treatment; method of shipment of Bituminous Coal from Mines, 1933-56; Mechanical Crushing of Bituminous Coal, 1940 and 1944-1956; 1956 Underground Bituminous Production by Methods of Cutting, by state; 1956 Underground Bituminous Products by Type of Drills, by state; Underground Bituminous Haulage Units in Use in Selected Years and by state in 1955-1956; Underground Bituminous Mines Using "Mother" Conveyors, 1945-1956, and by state, 1955-56; Principal Stripping and Loading Equipment in Use in Bituminous Strip Mines, 1932-56, and by state, 1956; Bituminous Strip Mines Using Power Drills in Bank or Overburden, 1946-1956, and by state, 1955-1956; Method of Haulage from Bituminous Strip Mines to Mine Tipple or Loading Ramp, 1948-1956, and by state, 1956.

Construction Methods and Equipment, 330 W. 42nd St., New York 36, N. Y. Two reports: "Estimated Number of Machines Operating in the Heavy Construction Field today" includes construction equipment in use in 1957; machines operating; tire market (average number of tires per machine, total number of tires); anti-freeze market (average radiator capacity, total radiator capacity-gallons); battery market; oil and fuel filter market (average and total number of filters); years of life; growth of equipment in use. "State Highway Contracting Plans for 1958" covers total contracts; interstate only; "ABC" system (Federal aid); state funds (no Federal aid); contract maintenance; machinery purchases.

Control Engineering, 330 W. 42nd St., New York 36, N. Y. Two reports: "Materials Utilization Survey" conducted among *CE* subscribers to develop information on the general areas of material utilization which apply to materials or equipment they work with, the properties which apply to the materials or equipment they work with, and materials which would satisfy current needs in design and application problems for which suitable materials are not yet available. "Survey of Measurement," a study made among *CE* subscribers to secure information on the variables which they now measure and their relative importance in terms of how much of their overall measurement activity they account for. It was also designed to determine for each variable whether it is principally indicating-recording or for control.

Creative Mailing Service, Inc., 460 N. Main St., Freeport, N. Y.: "American Business Firms Available by Standard Industrial Classification Numbers" includes manufacturers, wholesalers, retailers, contractors, service firms. It lists SIC numbers by major industry groups with a count of the number of names available in each: agriculture, forestry and fisheries; mining; contractors; manufacturers; transportation, communication and other public utilities; wholesalers; retailers; finance and real estate; service firms. In two of the major groups—manufacturers and wholesalers—the lists include all firms, regardless of financial rating. In five groups—agriculture, forestry and fisheries; mining; contractors; transportation, communication and other public utilities; finance and real estate—the lists include only firms rated above $5,000. In the remaining two groups—retailers, service firms—some of the lists include all firms rated over $5,000, but other selected lists include only firms rated over $35,000.

Dun's Review & Modern Industry, 99 Church St., New York 8, N. Y.: "A Study of Executive Buying Influence" presents findings of a survey of executive buying power in 10 cities, conducted by Fact Finders, Inc. A representative number of executives were asked such questions as: Did you buy during the past month? What did you buy? Did you see a salesman?

Electrical Manufacturing, 1250 Sixth Ave., New York 20, N. Y. Four market studies: "The Market for Magnetic Circuit Components and Semi-Conductor Devices," a 56-page report based on a survey of the original equipment market for these components. Includes information about applications (by SIC 4-digit industry groups), power ratings of devices used, and specifying influences. "The Original Equipment Market for Motors, Controls, Drives and Related Components," an 88-page report listing specific product applications for each type of equipment, grouped according to SIC. "The Original Equipment Market for Materials," a 126-page report detailing 1,979 product applications for 86 different types of metallic and nonmetallic materials. "The Market for Instruments" presents results of a broad study of applications for component instruments; also analyzes the market for 240 kinds of test instruments used in the field of electrically operated products.

Electrical World, 330 W. 42nd St., New York 36, N. Y. Five reports: "Electrical World Industry Statistics" includes a budget summary, construction expenditures, transition and distribution expenditures and construction, maintenance, Canadian construction, sales and average use, customers and revenue, energy production, installed capacity, station economics, financial, REA-financed systems, electrical manufacturing, appliances, changes in installed capacity, installed capacity by states and prime mover, capacity additions reported to *EW*. "New Look in Outdoor Lighting" deals with residential, commercial and industrial outdoor lighting. "Housepower" answers such questions as: What is its current main problem? What do utilities think of it? What can utilities do to improve it? "Electric Space Heating 1957" breaks down what still looks like the most promising residential load builder and balancer despite the drop in new home starts, tight money and economy slowdown. "Commercial Cooking: A 'Sleeping Giant' Potentially Worth 40 Billion Kwhr" covers the magnitude of the potentials of commercial cooking; increase in sales; how to sell to it and how it is being sold today; load analysis that deals with where utilities are finding new commercial kilowatts today.

Electronics, 330 W. 42nd St., New York 36, N. Y.: "Electronics Markets," a monthly non-technical publication covering "news and views for management and advertising executives." Each issue carries a page showing current statistics or trends for various segments or products of the industry. "Special Reports" such as "Transistors" and "Digital Computors." They usually discuss current industry trends, applications, future outlook and forecasts, and market and sales figures. Once a year a special report of the electronics industry is published. Last year's report was a midyear examination of the industry, divided into commercial, military and industrial categories. "Figures of the Week" published

weekly, presenting weekly, monthly, yearly and cumulative figures on receiver production; stock price averages; monthly employment and payroll figures; transistor and tube sales. "Production and Sales" published every other week in *Electronics* Business Edition, presents current unit and dollar volume figures on various electronic equipment and components.

Engineering and Mining Journal, 330 W. 42nd St., New York 36, N. Y. Five reports: "1956 Production Statistics of Important Metals" covers world production by country; U. S. production by state—copper, lead, zinc, gold, silver, aluminum, nickel, bauxite, molybdenum, cobalt, cadmium, antimony, magnesium, sundry metals. "Principal 1956 Producers of Important Metals" covers the United States and foreign countries—mining companies, smelters, refineries. "Consumption of Chemicals in the Metal and Nonmetallic Mining Field" presents data based on treatment of only 150 million tons of metallic and nonmetallic minerals in 75 western mineral processing plants. "Metal and Mineral Processing" shows how 77 metals are recovered. "Electronics and Ions" covers the keys to mineral processing. Also "The Effect on the Market for Chemicals of the Long-Range Mineral Developments," reprint of a talk by Alvin W. Knoerr, Editor, *Engineering & Mining Journal* and *E & MJ* Metal & Mining Markets, before the recent meeting of the American Chemical Society Division of Chemical Marketing and Economics. "Long-Range Mineral Predictions and a Look at Mining's Immediate Future," reprint of a talk by Mr. Knoerr before The Rotary Club, Butte, Mont., and The Northwest Mining Association, Spokane, Wash. *"E & MJ*'s Flowsheet Design Book."

Engineering News-Record, 330 W. 42nd St., New York 36, N. Y. Five studies: "A Study of Buying Influence and Buying Influence Patterns for 54 Products Used in Building and Construction," reports on findings of a survey conducted by Mills Shepard and Daniel Starch & Staff. It includes data on who buys; basic buying patterns; buying influence profiles for construction equipment, maintenance and related products; buying influence profiles for building products and supplies; buying influence profiles for installed equipment; buying influence profiles for general business products and services. "Tools for the Roadbuilder" covers what tools are available, what they can do, how they have developed, where they are going. "Progress in Buildings" reports on what type of design organization is best; how thin walls will get; how to build for automation; how mechanical homes will become. "1957-1958 Condensed Data on Engineering News-Records" has to do with the construction market, biggest U. S. industry; U. S. business activity 1951-56; construction dollar volume, etc. "Engineering News-Record's Annual Report and Forecast" includes a review of the 1957 construction market and *EN-R*'s forecast for 1958; data on heavy construction contract history 1925-1957; mass housing and public nonresidential building contracts 1947-1957; strong spots and weaknesses; postwar building boom in key states; state-by-state contracts in heavy construction 1925-1957; cost and price spirals, etc.

Factory Management and Maintenance, 330 W. 42nd St., New York 36, N. Y. Five reports: "Plant Practices on Electric Motor Usages" provides data on sources of supply used; factors considered in selection; types of motors in use-trends; buying influences measured. "The Factory Market for Valves" covers types and sizes most used in manufacturing industries; materials handled by valves. "Plant Practices on Vacuum Tube Usages" deals with range of applications; sources of supply; improvements desired; buying influences measured. "Plant Ownership and Use of Trucks, Station Wagons" presents data on truck ownership by make, size, age, plant uses; primary and other uses for station wagons; future purchase plants. "Plant Practices on Hot Water Usage" has to do with hot water uses in the plant; types and ages of systems in use; maintenance problems; needs for hot water.

Fleet Product News, 431 S. Dearborn St., Chicago 5, Ill.: "Media Buying Facts on the New Fleet Book in the 5 to 9 Unit Truck and Bus Fleet Market" includes a breakdown of the fleet market and its growth trend; a definition of the 5 to 9 unit truck and bus fleet market; results of a survey of the market including facts on buying procedures and purchasing influences; data on how this segment of the fleet market can be sold.

Fleet Owner, 330 W. 42nd St., New York 36, N. Y. Three studies: "Tire Survey" reports on the types of tires used; retreading or recapping schedules; number of tires purchased; source of purchases; individuals who participate in deciding the brands of tires to buy. "Cooling System Survey" reports on automotive fleets' use, maintenance practices, brand preferences and consumption of anti-freeze. "Fuels and Lubricants Survey" covers use of fuels and lubricants in fleet operation: the types used, lubricating schedules, amounts of fuel, lubricating oil and grease used, and individuals who participate in brand selection of motor oils and lubricants to be bought. Also these reprints of articles published in *FO:* "Fleet Air Conditioning" (25¢); "Washing and Painting" (25¢); "How to Set Up a Driver-Testing and Training Course" (25¢); "Report from 867 Fleet Owners on Instrument Use in PM" (35¢); "Bus Industry Trends in 1957: Costs Up."

Flow, 812 Huron Rd., Cleveland 15, O. Three studies: "Here's What It Takes to Sell the Growing Market for Material Handling & Packaging Equipment in the United States" gives a state-by-state breakdown of the major marketing areas where material handling and packaging equipment are purchased. "Packaging Market" presents data on size of general market; packaging machinery in use; planned packaging machinery purchases; packaging supplies in use; containers in use and planned purchases; shipping aids in use and planned purchases; protective packaging needs; carrier use; buying influence. "The Market for Overhead Cranes and Hoists" reports on use of overhead cranes and hoists by industry, by type; planned purchases of each; attachments used; type of operation where hoist or crane is employed; depreciation and replacement practices.

Foundry, Penton Bldg., Cleveland 13, O. Three studies: "1958 Foundry Industry Marketing Guide" covers foundry market areas; foundry capacity by states; foundry industry statistics. "This Is the Dynamic Foundry Industry" gives a picture of the value of castings production, now over $6½ billion. "Inventory of Foundry Materials Handling Equipment" provides data on what foundries use to move materials—conveyors, trucks, cranes, hoists—and foundry buying plans. Also these specialized market studies: "Foundry Market for Grinding Wheels," "Foundry Market for Coated Abrasive Belts and Discs;" "Shell Molding—Current Outlook."

Heating, Piping & Air Conditioning, 6 N. Michigan Ave., Chicago 2, Ill. Two reports: "Consulting Engineers Serving the Field" answers such questions as: How many firms are there in the U. S.? How many are engaged in designing systems and specifying equipment and materials in the field? "Electric Motors Used in Heating, Piping and Conditioning Systems of Industrial, Commercial, Institutional and Public Buildings" presents data on the market for motors used in this field, and information about applications of motor-driven equipment and types of motors used.

Hospital Management, 105 W. Adams St., Chicago 3, Ill. Two reports: "How Hospitals Buy Food Products" presents findings of a survey to discover some of the underlying reasons for fixed buying policies and methods in relation to a varied classification of products. "How Hospitals Buy Food Service Equipment and Supplies" covers the motivation regarding buying methods, preferred sources of supply, etc.

Hospitals, Journal of the American Hospital Association, 18 E. Division St., Chicago 10, Ill.: "The Hospital Market" includes data on more care for more people; 11-year trends; construction needs; U. S. facilities for inpatient care, 1956, and net increase, 1948-1956; units for outpatient care; hospital distribution; value of hospital construction 1946-1957; spending patterns; hospital operations; departmental expenditures; facilities and services.

House & Home, 9 Rockefeller Plaza, New York 20, N. Y. Five reports: "Roundtable on Selling" is an industry report on how builders and manufac-

turers can work together to increase their sales. "Pittsburgh Study," a marketing study of current selling practices of builders and their realty salesmen, and their use of manufacturers' merchandising materials and services in Allegheny County, Pa. "San Francisco Marketing Conference," a report of the industry's first National Executive Conference of over 400 top executives of building and manufacturing companies on the marketing of brand-name products and houses. "Selling the Home-building Market Today" takes up major considerations in marketing building materials and equipment in today's new house market and home remodeling market. "Builders' Model Homes," a definitive account of the role of the model home in today's marketing of building products.

Industrial Distribution, 330 W. 42nd St., New York 36, N. Y.: "Industrial Distribution and Marketing," a wall map which provides information about value added by manufacture by counties and location and number of industrial distributors in each locality. Statistics based on U. S. Department of Commerce 1954 Census of Manufactures and *ID's* Directory of Industrial Distributors. $2 each.

Industrial Equipment News, 461 Eighth Ave., New York 1, N. Y.: "Media Data File" which includes markets reached—SIC breakdown by industries; field and service; what's new—product news for all industries; suggestions for product publicity.

Industry & Welding, 812 Huron Road, Cleveland 15, O.: "Reader Inquiry Study" which covers the total inquiries produced by *Industry & Welding* and *Welding Illustrated* magazines for the year 1957. It breaks down the inquiries by product and industry as well as job title, and provides an effective tool for determining the interest various industries have in relation to each other for the products sold in the welding field.

Institutions Magazine, 1801 S. Prairie Ave., Chicago 16, Ill. Three reports: "The Institutions Market for Ice Making Equipment" provides data on development and present status of ice-making equipment ownership and use in institutions. "The Institutions Market for Air Conditioning Equipment" covers growth of the market; institutions in the air conditioning market; air conditioning, Detroit, 1952-53; air conditioning, Baltimore, 1952-53; dollar volume of institutions field purchases of air conditioning equipment, 1954-59; selling to institutions. "Survey of Hydrogenated Shortenings and Oils Used in Quantity Food Operations" deals with use of oils and shortenings in quantity food operations; different brands used and for what purpose; what influences the selection.

The Iron Age, Chestnut and 56th Streets, Philadelphia 39, Pa. Five studies: "Pumps for Inplant Operations," to be published this month, lists number, types and sizes of pumps used in metalworking plants. "Oil Filters in Metalworking Plants" shows the extent of the use of oil filters in metalworking plants for removing extraneous particles from various types of oils, coolants and other liquids. "How to Pinpoint Your Marketing to Metalworking," a how-to-do-it research brochure covering in detail: organizing metalworking for your market research; how to conduct a market survey; making a sales area analysis without a survey; successful marketing case history; how much a survey will cost. "Basic Marketing Data on Metalworking," a statistical summary of 1957 metalworking plant and employment data based on new SIC codes. Listed in 2-, 3- and 4-digit SIC codes. Shows actual plant employment figures for plants in each industry with 20 or more and 100 or more employes. Statistics summarized nationally, by states and industrial areas. Free to advertisers and agencies selling to metalworking. $25 for all others.

"Master List of Plants in Metalworking" which provides company name, city and state. 1957 4-digit SIC code, employment size code and *The Iron Age* Industrial Area Code for 26,675 metalworking plants with 20 or more plant workers. Leased only to manufacturing companies selling to metalworking for $200, plus $50 lease deposit. In addition, there are 15 buying-influence surveys—"How Metalworking Buys": Hydraulic and Pneumatic Parts, Engineering Products and Services, Non-Ferrous Metals, Non-Metallic Materials, Electric Motors and Components, Manufactured Parts and Components, Welding Equipment, Plant Service Equipment, Heat Treating Equipment, Metal Cleaning and Finishing Equipment, Materials Handling Equipment, Machine Tools and Other Metalworking Equipment, Steel Mill and Foundry Equipment, Ferrous Metals and Mill Products, Power Transmission Equipment (except electric).

These are definitive studies of executive participation based on probability sampling of all plants in metalworking with 20 or more plant employes. Data are given for metalworking as a whole, and in detail for SIC 35 machinery (except electric), and SIC 37 transportation equipment in terms of title, primary function, multiple functions and plant size. They define purchasing responsibilities, specific roles in purchases. Similar data on SIC 33, primary metals, and SIC 34, fabricated metals, will be available August 1, 1958. Also a "Basic Marketing Map of Metalworking" (23″ x 34″ in six colors, printed on plastic paper), which shows the 86 industrial areas in 20 states that account for over 90% of metalworking's plant employment. Areas are shown in large scale with 1957 figures for the number of plants with 20 or more employes, and number of employes in these plants. Free to advertisers and agencies selling to metalworking. All others, $2 a copy.

Jobber Product News, 431 S. Dearborn St., Chicago 5, Ill.: "1958 Marketing Facts," a 16-page booklet which covers the field of automotive distribution. It highlights several important areas of interest to advertisers in the automotive after-market, such as publication readership, coverage and penetration of the automotive wholesale market, advertising volume trend.

Machine Design, Penton Building, Cleveland 13, O., has use and application information available on the original equipment market over a wide range of products, and will consult with anyone interested in seeing this material.

Machinery, 93 Worth St., New York 13, N. Y.: "Where Is Your Metalworking Market — Geographically?" covers the geographical distribution of machine tool shipments in the United States: distribution by state and region; geographical distribution of machine tools by cutting and non-cutting types. A map shows the relative rank of states which account for over 1% of 1956 shipments.

Marine Engineering/Log, 30 Church St., New York 7, N. Y. Five reports: "The Trend in Air-Conditioning" covers air-conditioning of passenger ships, tankers and cargo ships; includes a list of active vessels that are air-conditioned. "193,800 Valves—$24,600,000 Worth" reviews the marine market for valves as represented by merchant vessels under contract; includes the complete list of valves for a 33,000 dwt. tanker. "A $3,000,000-Plus Market for Wire Rope & Fittings" shows annual requirements for turnbuckles, sockets, shackles and cargo hooks for new vessels and for replacement purposes on existing vessels. "Marine Market for Steam Traps, Steam Strainers and Liquid Strainers" shows number of steam traps and strainers on a Mariner type ship, a tanker and on minor merchant vessels; indicates the number required in each service, such as steam heat system, cargo oil system, etc. "6,400 Pumps Required for New Merchant Vessels Under Contract" includes lists of pumps on a large tanker, a small tanker, a Mariner-type cargo ship, a large passenger ship, a tug boat and a towboat. "Marine Money . . . Billions Wide . . . Years Long" highlights the current developments in merchant and naval shipbuilding, the projected volume of work and the key buying influences; includes media data on *ME/Log.* "1958 Data Digest" is a fact file which reports the 1958 merchant and naval shipbuilding program; dollar volume and number of ships involved, ship repair and ship operation developments; tells where marine sales originate and describes key buying factors; outlines coverage of the marine market. "Marine Market and Media Data" (based on the NIAA recommended outline) gives the basic statistics of the marine market and *ME/Log's* coverage and editorial service. "The Marine Market for Paint" tabulates the estimated annual requirements for paint and protective coatings in the marine industry, including quantities needed for maintenance of the existing fleet and for new construction.

Metal Progress, 7301 Euclid Ave., Cleveland 3, O. Six studies: "How Metals Are

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Engineered at Eaton Manufacturing Co." shows the responsibility delegated to key personnel—who, and what department, handles each phase of the manufacturing process. "How Metals Are Engineered at Surface Combustion Corp." shows the responsibility delegated to key personnel—who, and what department, handles each phase of the manufacturing process. "A Study of Metal Heating Equipment" provides data on large heat treaters (255): types, ages, operation, procedures, use and purchase methods of metal heating equipment. "Cutting Fluid Selection" covers factors considered in the purchase and selection of cutting fluids by metalworking plants (239). "Parts and Components" is the story of the metals engineer's function in design. "The Competitive Age of Metals" provides a check list of factors that influence the purchase and use of products.

Modern Railroads, 201 N. Wells St., Chicago, Ill.: "Study of Diesel Shops and Service Facilities" to help the railroad supply company to definitely gauge the market potential on each railroad and within each of its salesmen's territories. It details the growth and extent of railroad Diesel repair and overhaul facilities throughout the industry. The location of each shop and service facility is indicated.

Motor Age, Chestnut and 56th Streets, Philadelphia 39, Pa. Two reports: "Automotive Marketing Guide," fifth edition, presents data on automotive wholesaling and the automotive retail market; total sales made by all automotive wholesalers in the U. S., and the relative importance of one area compared with another. "A New Insight into Where Automotive Service Work Is Done," a definitive analysis of automotive service patterns—where it is done, by what type outlet geographically, classification-wise, who buys what equipment, etc.

Nucleonics, 330 W. 42nd St., New York 36, N. Y. Three studies: "Nucleonics Markets," a bimonthly, non-technical publication directed to executives, sales and advertising men engaged in marketing to the nucleonics industry. Each issue contains material designed to help these men maximize their sales to the nucleonics industry. "Statistics of the Month" published monthly, presenting monthly and yearly figures for: Nuclear Contracts; Access Permits; Isotope Use; Nucleonics Industry Employment; Reactor Construction. "Market Data Sheets": individual sheets, containing market information on specific parts of the industry, such as, Reactor Vessels & Internals; Control Apparatus; Heat Exchangers; Pumps, Valves & Fittings; Piping, Welding and Inspection; Tanks & Auxiliaries; Instrumentation; Fuel Handling. Also research services to industry which cover questions about the market for particular products used in the nucleonics industry and products which may have use in the industry. All are answered by the Research Department of *Nucleonics*.

Occupational Hazards, 812 Huron Road, Cleveland 15, O. "Distribution of Safety Equipment," a study of the safety equipment distributor, showing the types of equipment most frequently stocked; increases in the number of items stocked in the past three years; the percentage of dollar volume done by individual distributors on various types of products.

Office Appliances, 600 W. Jackson Blvd., Chicago 6, Ill. "Sales Planning Handbook" for recording, analyzing and projecting sales performance in the stationery and office equipment market. It is based on exclusive, Census-based industry sales data resulting from an intensive statistical study made by Bureau of Business Research, Indiana University. It provides a record of industry shipments in terms of the geographical area to which the shipments are made. Of special service to manufacturers of office supplies, commercial stationery, business machines, office furniture, office equipment in determining: sales territory boundary lines; trade channels to be used in each territory; location of district sales offices or warehouses; past sales performance; sales potentials; sales quotas and compensation plans; adver-

tising budgets at the local level. Free to manufacturers of office supplies and equipment and their advertising agencies. $5.00 to all others.

The Olsen Publishing Co., 1445 N. Fifth St., Milwaukee 12, Wis. Six reports: "This Is the Milk Products Industry," prepared according to Standard Industrial Classification. It includes data on trends; units in the industry (1957 production); utilization of whole milk and skimmilk, 1956; butter, cheese, nonfat dry milk solids, and evaporated milk production, 1956. "This Is the Dairy Industry" covers the size of the industry; production; sales; manpower; demand; modern plants, methods and equipment; types of products; supplies and equipment; merchandising and selling. "Jobbers and Dealers Selling Dairy and Ice Cream Equipment and Supplies" provides a complete list of jobbers and dealers (names and addresses, names of sales managers, territories, and number of salesmen). Dealers, brokers and manufacturers' agents are also listed. "Motor Truck Survey" provides information about the market for motor trucks and truck refrigeration in the fluid milk industry. Surveyed were 18,017 milk dealers (plants processing and distributing fluid milk in paper and glass containers). "Ice Cream Manufacturing and Selling Marketing Facts" includes a forecast of frozen dairy products manufacturing (1925 through 1975); modern merchandising methods; an up-to-date production flow chart, and listings of equipment and supplies purchased each year by the industry. "Dairy Products Data Sheets" include 1956 production of butter, nonfat milk solids, whole milk equivalent of dairy products, skimmilk equivalent of certain skimmilk and buttermilk products, cheese, evaporated milk, creamed cottage cheese, milk, soft frozen dairy products, sherbet, ice cream, ice milk and utilization of whole milk and skimmilk.

Petroleum Refiner, P. O. Box 2608, Houston 1, Tex. Two reports: "A Closer Look at the Growth of Petrochemicals" includes data on their integral part in the multi-billion-dollar refining-processing industry; sales potential; capital expenditures during the next 10 years; petrochemical raw materials and products; petrochemical operations. "The Refining-Processing Industry" tells how to sell this billion-dollar annual market. Data cover purchasing patterns; industry expenditures; trends, developments; equipment usage; market scope; plant locations; advertising approach.

Pipe Line Industry, P. O. Box 2608, Houston 1, Tex.: "Selling the Expanding Pipe Line Market" presents an industry forecast which includes pipe line construction projects now under way and planned for the next year or two; growth of the natural gas industry; anticipated expenditures for new facilities; international growth. Other data cover U. S. crude oil and products pipe lines, 1952 to 1956 (pipe line mileage in operation, pipe line construction, U. S. natural gas pipe line mileage by type, 1956); current trends in the pipe line industry; equipment used in the industry; pipe line contractors; industry buying practices; U. S. pipe line companies; worldwide activity.

Plant Engineering, 308 E. James St., Barrington, Ill. Nine studies: "1958 Electrical Products Brand Preference Study" to be published about September 1. It will cover brand preferences over a wide range of industrial electrical products and will compare results with those obtained by a similar 1956 study. "Portable Electric Tools Study" covers number and brands of maintenance and production portable electric tools used in plant surveys. "Readership and Reader Product Interests: Analysis of 1957 Monthly Editorial Surveys" is a study of one industrial publication's readership and reader product interests from returns to monthly editorial questionnaires. Results were analyzed for relationships among SIC classifications, plant sizes, product interests, job titles of respondents, etc.

"Anti-Friction and Plain Bearings Marketing Study", which will be published about September 1, will cover specifying and purchasing practices and responsibilities; favorable and unfavorable features of bearings and bearings packaging; brand preferences for sleeve, roller, and ball bearings and split and solid pillow blocks. "1957 Building Products Study" provides data on individual specifying influence and brand preference studies for 13 major categories of industrial construction materials: flooring (9 types); roofing (4 types); siding (5 types); wall and ceiling materials (5 types); doors and windows (5 types); glass and glazing (4 types); floor coverings (3 types); insulation (6 types); paints and protective coatings (5 types); framing and structural (3 types); prefabricated buildings; locks and padlocks; fencing (chain link and gates). "200-5,000 hp Motors Study" deals with used, brand preference and specifying and purchasing practices and responsibilities in the 10 heaviest-user industry groups. "Petroleum Products Study" provides data on the lubrication subjects of most interest to *Plant Engineer's* readers, information they want advertising to provide, services provided by petroleum products manufacturers that are of most important to them, and the comparative frequency with which respondents read the publications and are visited by oil company salesmen.

"Trolley Busways Study" covers the cost, advantages and applications of trolley busways as electrical feeders for powering moving machinery and equipment. "Electrical Problems and Practices Study" presents findings of a survey of plant problems in the modernization, design, expansion, control or maintenance of such electrical equipment as capacitors, synchronous motors, power centers, cable, generators, etc., and the practices employed in handling some of these problems.

Power Engineering, 308 E. James St., Barrington, Ill. Six studies: "Sonite Repair Kit Purchase and Appliances," a study of the extent to which inquiries received by the publisher resulted in the purchase and use of a product for repairing tanks without welding. "Masonry Products Maintenance Material" reports the extent to which inquiries received by the publisher resulted in the purchase and use of a product for the repair of masonry materials, particularly concrete. "How to Improve Reader Interest Ratings in Power Engineering" analyzes various creative and mechanical features of industrial advertisements to determine the extent to which various advertising techniques contribute to reader attention and reader interest and thus to an improvement in advertising effectiveness. "Valve Repair and Replacement Procedures" deals with the influence of power plant personnel in specifying the purchase of valves; the extent of their responsibility for valve maintenance, and their problems and practices in valve repair and replacement. "Indiana Power Plant Readership Study" (conducted by Torkel Gundel Research), analyzes the influence of power plant personnel in industrial plants, electric utilities, other utilities, and in institutions and service establishments in the purchase of boilers and boiler accessories as well as motors, switchgear, and electrical distribution equipment; also comparative reader interest in four publications directed to the power plant field. "Electrical Products Inquiry Study" (conducted by Torkel Gundel Research) analyzes the influence of power plant personnel in specifying and purchasing motors and control equipment; switchgear; power distribution equipment; electrical instruments, and lighting equipment. Also reports the comparative usefulness to readers of five publications directed to the power plant field.

Practical Builder, 5 S. Wabash Ave., Chicago 3, Ill. Eleven studies: "Characteristics of the Light Construction Market" includes basic data on housing and other types of light construction activity. "Survey of Builder Operations in New Residential Construction" presents data on types and sizes of new home construction, use of materials, equipment furnished. "How Builders Buy—and Why" reports on Builder Buying Habits conferences. "How to Sell Houses" gives merchandising tips and ideas that sell homes. "Builder Buying Habits in 18 Basic Product Categories" tells who buys and from whom. "Use of Power Tools in Building Industry" reports on total investment, use, buying habits and buying intentions. "Use of Tractors and Attachments in the Building Industry" deals with time- and money-saving equipment for the builder. "Survey of Windows" answers such questions as: How are they sold? Who sells and who buys them? What types and quality? Sales outlook? "The Know-How of Motel Construction" reports on new business opportunities for the builder and manufacturer. "Live Better Electrically" provides data on electrical living in today's and tomorrow's homes. "Water Softening" reports on its sales-plus for the builder who provides it.

Precision Metal Molding, 812 Huron Road, Cleveland 15, O. Three studies: "Production Data Book for 1958" includes tabulation of shipments of nonferrous castings of all types, plus figures on shipments of iron and copper powders from 1952 through 1957, with indications of trends and technical factors. "Trends in the Production of Shell Mold Castings" reports results of a survey among producers of shell mold castings on length of time they have been producing, whether captive or contract, types of alloys cast and other basic data. "How 923 Plants Finish Die Castings" analyzes relative growth of painting, plating, chemical coatings and other finishing procedures over a three-year period. Also has data on machining and assembling of castings. Responsibility for specifying finishes and finishing materials is included.

Product Engineering, 330 W. 42nd St., New York 36, N. Y. Twenty-two reports: "Canada," deals with Canadian metalworking market growth. "Electronics" is an extension report on a "newly" arrived industry. "Elevators and Escalators" is a special report on this specialized industry. "Fabricated Metal Products" reports on hardware, garden and sports products exhibited at the 1957 hardware show. "Internal Combustion Engines" is a new study of trends and production of piston engines. "Plastics Industry" reviews 1956 progress in this growth industry. "Southeastern States Study" reports on metalworking progress in the South Atlantic area. "Tobacco Industry" is a special report on cigar-making equipment. "Trucking Industry" reviews this big industry and its suppliers. "Bearings" presents industry data on bearing use and buying influences. "Broaching" is a study of markets for equipment and tools. "Castings" covers industry data on castings consumption.

"Cutting Oils" is a *Chemical Week* report on latest developments. "Gear Hobbing" is a market analysis. "Gear Motors" covers applications and U. S. production. "Inspection and Quality Control" includes a special air-gauge study and trends in quality control. "Machine Tools" deals with present trends in buying. "Non-Ferrous Metal Parts" covers castings, stampings, forgings and extrusions. "Power Hand Tools," in two parts: market among major producers; air-electric tool analysis. "Large Carbide-Tipped Milling Cutter" shows that SIC 35 is the key market, and breaks down the market for milling machines. "Cigar-Making Machinery" reports on how American Machine and Foundry has ascended as the major manufacturer of machines for this resurging industry. "Cleaning Methods Used in Metalworking" gives a step-by-step description of the various metal-cleaning processes.

Progressive Architecture, 430 Park Ave., New York 22, N. Y. Four studies: "Just Ask Your Salesmen!" is a compilation of techniques used by 1,718 architectural product salesmen in selling to architectural firms. "Comprehensive Survey of

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Answers to Quiz on Page 41

S.I.C. Code	
2037	Seabrook Farms
2072	Hershey
2073	American Chicle
2111	R. J. Reynolds Tobacco
2274	Armstrong Cork
2322	Union Underwear
2532	Hamilton Mfg.
2613	Johns-Manville
2641	Minn. Mining & Mfg.
2792	American Bank Note
2822	Dow Chemical
2825	Eastman Chemical Products
3021	Converse Rubber
3211	Pittsburgh Plate Glass
3275	Owens-Corning Fiberglas
3352	Aluminum Co. of America
3421	Gillette
3424	Nicholson File
3521	Caterpillar Tractor
3669	Westinghouse
3715	Fruehauf Trailer
3742	The Budd Co.
3871	General Time, Westclox Div.
3931	Baldwin Piano Co.
3951	Parker Pen Co.

Architectural Magazines," conducted by A. S. Bennett-Cy Chaikin, Inc., covers opinions of reporting job; editorial improvement; reader preference; regular readership; magazines read most thoroughly; staff readership; architects' reaction to advertising, etc. "High-Rise Office Buildings" discusses the importance of this market to architects and manufacturers, taking up such subjects as sun-control devices; criteria of office modules and elevator requirements; walls that have character; unified designs; consideration of automobiles as a factor in occupancy and shapes of buildings, etc. Illustrated throughout.

"Modular Assembly" has to do with the art of design with standardized parts—modular measure; prefabrication; structure/use modules; proportional modules; curtain walls; modular components; interchangeable panels, etc. Illustrated throughout. Also "How to Sell Effectively to Architectural Organizations," a sales manual which presents step-by-step analysis of the purpose, functions, responsibilities and organization of the architectural firm and the men who comprise it. Sells for 50¢ a copy. And "Successful Techniques in Architectural Advertising," a study by Howard G. Sawyer, vice-president, James Thomas Chirurg Co., which will be published later this year. It will be based on Mr. Sawyer's examination of 12 Starched issues of *Progressive Architecture*.

Railway Age, 30 Church St., New York 7, N. Y. Twelve studies: "Diesel-Electric Motive Power in Railway Service" presents a revised tabulation of the number of units in service on American railroads by types and horsepower classifications, together with 1957 installations. "$8,400,000 Spent in 1956 for Cleaning Compounds" describes the uses for cleaning compounds in the railway industry; gives data on expenditures for various categories of cleaning jobs, and the procedures followed. "Railway Building Construction" summarizes the volume of building construction in progress on the railroads each year by types of structures and the estimated cost. "Railway Purchases of Non-Revenue Automotive Equipment in 1957" provides a list of the number of automobiles, buses, highway tractors, highway trailers and trucks purchased by the railroads in 1957, and the number owned as of December 1957.

"Railway Market for Electrical Wire and Cable" summarizes the market in the signaling and communications field, gives the estimated annual volume of purchases for replacements and new construction. "How to Flag Down More New Business in Railroading" analyzes trends in railway buying; what's ahead in railway purchases; the industry's long-range buying needs; tells who the men are who make the railway market, and how to reach these men—both in railway management and in technical and engineering staffs, through the Simmons-Boardman railway magazines. "Your Railway Market from Now to 1965" reports 1957 buying; gives the highlights of important trends now in progress; tabulates the long-range expenditures for facilities needed to build the super-railroads of tomorrow. "Market and Media Facts" (based on the outline recommended by NIAA) gives basic data on the railroad market; circulation and editorial facts about *Railway Age*.

"Automatic Retarder Equipped Classification Yards" lists, by railroads, the number of railroad classification yards equipped with electric and electro-pneumatic car retarders; the location of yards, number of tracks and type of retarders installed. "Radio Communications Equipment on U. S. Railroads" provides a tabulated summary of the present and needed installations of radio communications equipment on railroads. "The Opportunity Ahead" forecasts future trends in U. S. freight traffic over the next decade; prospects ahead for the railroads, and what they will need in order to share in the economic expansion of tomorrow; a look at the railroad and national defense. "Ad-Conditioning" tells the management story of railroading; how the needs of the executive and management groups for current information are filled by *Railway Age;* who comprises its audience; comments of individual railway officers.

Refrigeration & Air Conditioning Business, 812 Huron Road, Cleveland 15, O. Two reports: "The Refrigeration & Air Conditioning Wholesaler Study" gives a tabulated report of those wholesalers—size, scope and products they sell. "The Heating, Air Conditioning, Refrigeration Contractors in 21 Metropolitan Areas" is a study indicating the number in each group, duplication of services performed by each group and total number in each metropolitan area.

Selecciones Del Railway Age, 30 Church St., New York 7, N. Y.: "Purchases of U. S. Railway Equipment and Material by Latin American Railroads" provides a tabulation of equipment purchased by individual Latin American countries. List includes classes of equipment and materials purchased and dollar volume.

Steel, Penton Bldg., Cleveland 13, O. Four market studies: "Metalworking Markets in the U. S. A.," a 246-page book which presents a 4-digit S.I.C. analysis of the location of all metalworking plants with 20 or more employes at the county level. The number of metalwork-

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ing employes in each 4-digit industry in each county is also included. In addition, there is detailed information about the 21 major metalworking operations performed. Sells for $25 a copy. "Metalworking Markets in the U. S.," a 30-page report offering a condensed version of the 246-page bound volume on "Metalworking Markets in the U. S. A." It offers a summary of the metalworking industry and shows how to evaluate metalworking's importance as a market and the national picture.

"What Metalworking Management Expects in 1958" covers predictions on trends in profits, costs, employment, sales costs, defense spending, expansion and new product development. General managers of 7,500 plants participated in this annual survey of business expectations. "Facts and Figures of the Metalworking Industry," a 46-page book of charts, graphs and statistics to help marketing and sales executives in analyzing markets and checking trends in pricing, earnings, labor and production in metalworking. Also a four-color map, "Metalworking Markets in the U. S.," approximately 37" x 23", which depicts the metalworking markets in the U. S. and shows the geographic distribution of metalworking employes by counties. Sells for $1 a copy.

Transportation Supply News, 431 S. Dearborn St., Chicago 5, Ill.: "Proven Fleet Readership," an analysis of *TSN* readership by types of fleets, by individuals' titles, by sizes of fleets.

World Oil, P. O. Box 2608, Houston 1, Tex. Two studies: "A Picture Primer on Offshore Operations" covers the outlook for offshore; equipment and manpower used; exploration; drilling; production; estimate of offshore well costs; permanent and mobile drilling platforms; potential oil reserves; increased activity in Texas; what is needed in equipment and services. "Market Data on the Oil Drilling-Processing Industry" presents forecasts and predictions for the industry; data on industry expansion; capital expenditures; wells and footage; equipment usage; buying practices; advertising approach; sales tips.

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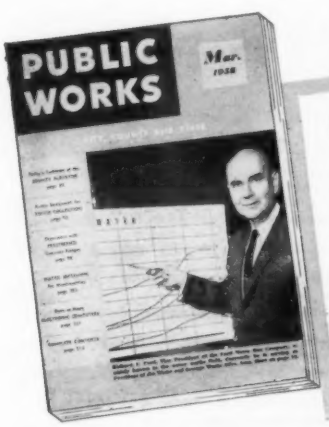

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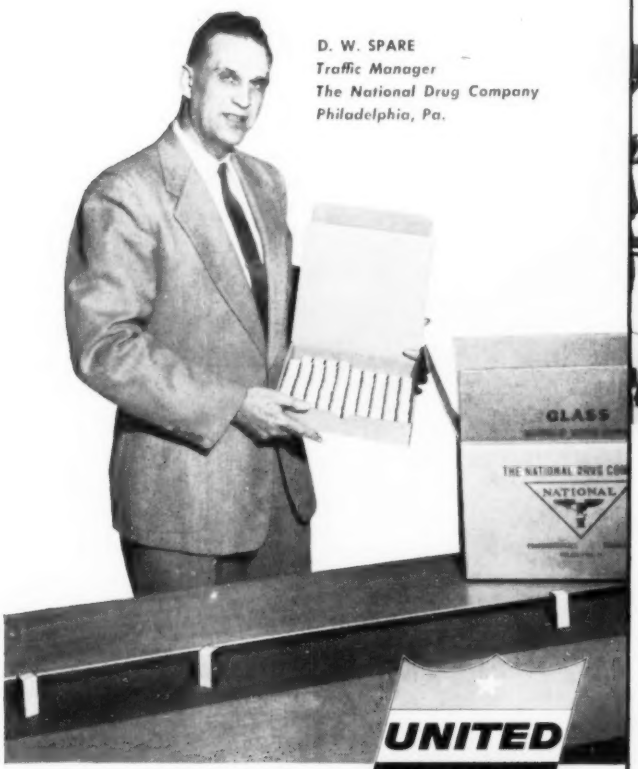

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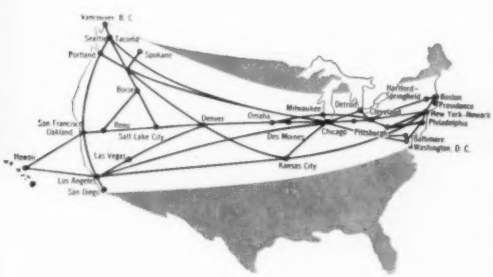

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